



6503.0 - Household Expenditure Survey and Survey of Income and Housing, User Guide, Australia, 2015-16

Latest ISSUE Released at 11:30 AM (CANBERRA TIME) 10/10/2017

Summary

Introduction

INTRODUCTION

THE PURPOSE OF THIS GUIDE

This User Guide publication contains details about the Survey of Income and Housing (SIH) and the Household Expenditure Survey (HES) conducted in 2015-16. It includes information about the purpose of the survey, the concepts and contents, and the methods and procedures used to collect the data and derive the estimates. The publication also outlines the differences between the 2015-16 survey and earlier SIH and HES surveys. Its purpose is to help users of the data understand the nature of the surveys, and the potential of these surveys to meet user needs.

The 2015-16 SIH collected information from a sample of 17,768 households over the period July, 2015 to June, 2016. Of the 17,768 households that completed the SIH, 10,046 were also included in the HES. The 2015-16 SIH and HES included an additional sample of metropolitan households whose main source of income was a government pension or allowance to support the compilation of the Pensioner and Beneficiary Living Cost Index (PBLCI).

MAIN PURPOSES OF THE SURVEY

The SIH and HES are household surveys which collect information on sources of income, amounts received, household net worth, housing, household characteristics and personal characteristics. The HES also collects detailed information about household expenditure and financial stress. The principal objective of these surveys is to facilitate the analysis and monitoring of the social and economic welfare of Australian residents in private dwellings. The main users are government and other social and economic analysts involved in the development, implementation and evaluation of social and economic policies.

Income and wealth data are used by economic and social analysts and policy makers to:

- understand the distribution of economic resources among private households in Australia;
- identify households most at risk of experiencing economic hardship; and
- understand the effects of taxation and income support systems on the wellbeing of people and households.

Housing data are used for:

- housing affordability studies;
- analysis of housing occupancy, including levels of home ownership and housing utilisation; and
- comparison of the housing costs by tenure type.

Expenditure data are used to:

- understand the effects of taxation and welfare payments on the cost of living for people and families;
- identify the changes occurring in people's spending habits; and
- support the compilation of key economic indicators, including the National Accounts and the Consumer Price Index (CPI) and Pensioner and Beneficiary Living Cost Index (PBLCI).

HISTORY OF COLLECTION

The SIH was conducted annually from 1994-95 to 1997-98, and then in 1999-2000, 2000-01 and 2002-03. Commencing in 2003-04 the SIH has been conducted every two years, and is integrated with the Household

Expenditure Survey (HES) every six years.

Previous surveys of household income were conducted by the Australian Bureau of Statistics (ABS) in 1979, 1982, 1986 and 1990. These surveys were generally conducted over a two-month period, compared to a twelve-month period for the SIH. The SIH also included improvements to the survey weighting and estimation procedures, changes to the scope and coverage of household income and changes to interviewing methods.

Previous Household Expenditure Surveys were conducted by the Australian Bureau of Statistics (ABS) in 1974-75, 1975-76, 1984, 1988-89, 1993-94, 1998-99, 2003-04 and 2009-10, however, current results are only comparable back to 1984.

Comprehensive household wealth data has been collected in every cycle of the SIH since 2003–04, except for 2007–08.

The 2009-10 and 2015-16 SIH and HES have also included an additional sample of metropolitan households whose main source of income was a government pension or allowance to support the compilation of the Pensioner and Beneficiary Living Cost Index (PBLCI). The SIH continues to include an additional sample of households outside of greater capital city areas to support housing indicators in regional areas.

KEY FEATURES OF THIS CYCLE

Content collected on solar energy installation and usage is a new addition to the 2015-16 SIH and HES. Analysis using this data can be found in Household Income and Wealth, Australia, 2015–16 (cat. no. 6523.0). An index of service accessibility has also been added to the survey data. The Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA) enables analysis of economic wellbeing and expenditure in relation to accessibility of services for metropolitan areas and summary results can be found in Household Expenditure Survey 2015–16, Summary of Results (cat. no. 6530.0).

Income

INCOME

THE MEASUREMENT OF INCOME IN THE ABS SURVEY OF INCOME AND HOUSING

The Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) collects detailed income information from each household member (15 years and over) through personal interview. Household income consists of all current receipts, whether monetary or in kind, that are received by the household or by individual members of the household, and which are available for, or intended to support, current consumption.

Income includes receipts from:

- employee income (whether from an employer or own incorporated enterprise), including wages and salaries and other receipts from employment, income provided as part of salary sacrifice and/or salary package arrangements, and non-cash benefits provided by employers;
- profit/loss from own unincorporated business (including partnerships);
- net investment income (interest, rent, dividends, royalties);
- government pensions and allowances (includes pensions and allowances from Commonwealth and State and Territory governments as well as pensions from overseas); and
- private transfers (e.g. superannuation, workers' compensation, income from annuities, child support, and financial support received from family members not living in the same household).

Household income excludes receipts from:

- capital transfers such as inheritance, lump-sum retirement benefits, life insurance claims (except annuities), compensation (except for foregone earnings), loan repayments;
- certain current transfers offset against expenditures (for example, lottery and other gambling winnings, non-life insurance claims);
- receipts that result from a reduction in net worth (for example, sale of assets, withdrawals from savings, and loans obtained); and
- holding gains/losses resulting from changes in the value of financial and non-financial assets and liabilities (for example, the value of shares held).

The various components of income are included below in 'Components of income'.

More information on the conceptual definition of household 'income' can be found in the publication Standards for Income Variables, June 2015 (cat. no. 1287.0).

PRIVATE, GROSS, DISPOSABLE AND FINAL INCOME

Private income

Private income comprises all current income receipts excluding government pensions and allowances.

The treatment of overseas pensions varies. Where 'private income' and 'government pensions and allowances' are presented the overseas pensions are included in 'government pensions and allowances'. In comparison, where 'private income (including imputed rent)' and 'social assistance benefits in cash' are presented the overseas pensions are included in the 'private income (including imputed rent)'. This is because 'social assistance benefits in cash' refers only to Australian government pensions and allowances.

Gross income

Gross income is the sum of the income from all sources before income tax and the Medicare levy have been deducted. Prior to 2005–06, Family Tax Benefit (FTB) was paid through the tax system or as a lump sum and was excluded from gross income for practical reasons. Since 2005–06 these payments have been included in gross income.

Disposable income

Disposable income is the income available to a person or household after income tax, Medicare levy and Medicare levy surcharge (if applicable) have been deducted. Disposable income better represents the economic resources available to meet the needs of households than gross income. The Medicare levy surcharge has been calculated and deducted from gross income in the calculation of disposable income since the 2007–08 cycle of SIH.

Income tax liability is estimated for all households using taxation criteria for the relevant financial year and the income and other characteristics of household members reported in the survey (such as private health insurance

fund membership).

Prior to 2005–06 the derivation of disposable income also included the addition of Family Tax Benefit (FTB) paid through the tax system or as a lump sum by Centrelink since for practical reasons it was not included in the gross income estimates. From 2005-06 to 2013-14, FTB amounts were modelled for some households where those amounts were not reported by the respondents. However, in 2015-16, the introduction of a new model for micro-editing government payments includes modelling of FTB values. These have been utilised where the reported amount was missing, significantly above the maximum eligible amount or where other payments, related to FTB, were reported by survey respondents, such as single parents with children under 8 years who receive Parenting Payment. More information about the effect of this change is available in the 'Data collection and processing' chapter of this publication.

Note that while child support and other transfers from other households are included in the income of the households receiving the transfers, they are not deducted from the incomes of the households making the transfers in deriving disposable income.

Social transfers in kind

Social transfers in kind (STIK) consist of goods and services provided free or at subsidised prices by the government. In output from the SIH, these are restricted to those arising from the provision of education, health, housing, child care, electricity concessions and other social security and welfare services. STIK includes reimbursements of approved expenditures such as the Medicare rebate, the Private Health Insurance Rebate, the Child Care Benefit and the Child Care Rebate. The cost of administering the provision of social assistance benefits in cash is included. For more information see the 'Social transfers in kind' section of this publication.

Final income

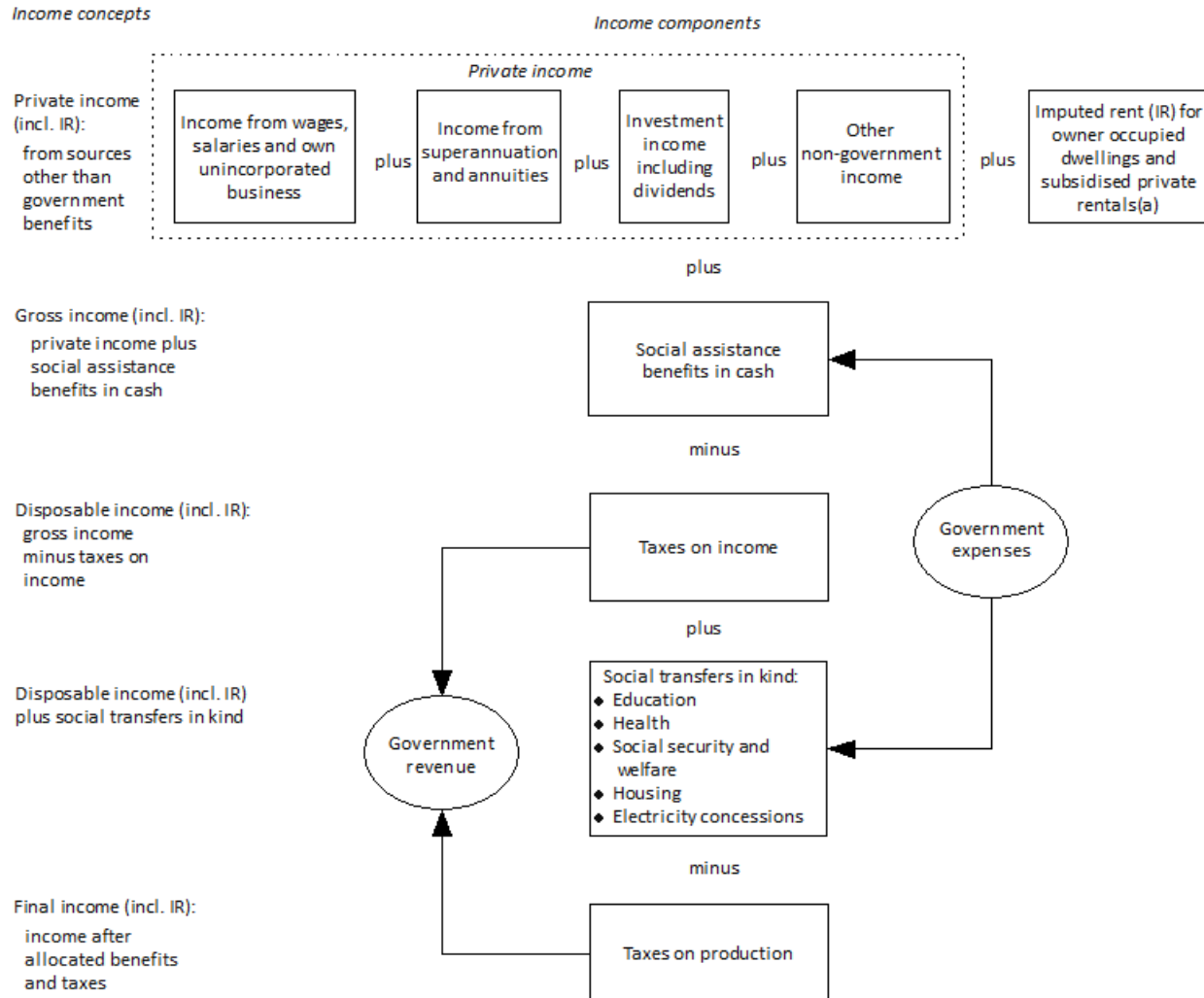
Final income is the most extensive concept of household income produced by the ABS. Final income is equal to household disposable income plus social transfers in kind, less taxes on production (such as the GST, duties on imports, and fuel and tobacco excise). Final income can only be calculated using data from the Household Expenditure Survey (HES) as taxes on production are estimated for individual households based on their purchase of goods and services. The HES is conducted every six years for a sub-sample of households.

Final income shows the full effect of taxation (income taxes and taxes on production) and government expenditure (cash payments and in kind transfers) on the distribution of income among private households in Australia.

More detail on the components of final income will be included in the publication Government Benefits, Taxes and Household Income, Australia, (cat. no. 6537.0).

Diagram 1 INCOME CONCEPTS AND COMPONENTS

Income concepts



(a) Excludes imputed rent for renters from state/territory housing authorities. This benefit is included as a STIK (housing)

CURRENT, ANNUAL AND WEEKLY INCOME

Current and annual income

Current income is the income received by respondents at the time when survey information is collected from them. This is the main measure of income included in published output from the SIH and HES.

For employees and recipients of government pensions and allowances such as Centrelink payments, current income is generally based on their most recent payment, as long as it is their usual payment. Additional questions are used to obtain information about receipts which may not have been included in the most recent payment. For employees, information is collected on irregular overtime, bonuses and non-cash benefits. For recipients of government pensions and allowances, information is collected on reductions to payments due to lump sum advances, and less frequent payments such as the Carer Supplement.

Annual income provides a somewhat longer term perspective of income, providing data about income obtained from all sources over the whole year. It has the advantage of being less sensitive to short term variations in income, such as a person having little or no current income during a short period of unemployment and for which they have adequate resources from past employment to avoid economic hardship. However, annual income has the potential to be limited in its relevance to the current situation of respondents, especially when analysing the combined income of a household which gained or lost adult members during the course of the year. There are also practical difficulties in collecting annual income, for example where respondents have had short periods of time in different jobs, or have received Centrelink payments for short periods of time, they may not accurately recall each of these sources of income.

Weekly income

Income is collected using a number of different reporting periods, such as the whole financial year for own unincorporated business and investment income, and the usual payment for a period close to the time of interview for wages and salaries, other sources of private income and government pensions and allowances. The income is

divided by the number of weeks in the reporting period to derive weekly income. Estimates of weekly income from the SIH and HES do not, therefore, refer to a specific week within the reference period of the survey.

EQUIVALISED DISPOSABLE HOUSEHOLD INCOME (EDHI)

A major determinant of economic wellbeing for most people is the level of income that they and other family members in the same household receive. While income is usually received by individuals, it is usually shared between partners in a couple relationship and with dependent children. To a lesser extent, it may be shared with other children, other relatives and possibly other people living in the same household, for example, through the provision of free or cheap accommodation. This is likely to be the case for children other than dependents and other relatives with low levels of income of their own. Even when there is no transfer of income between members of a household, or provision of free or cheap accommodation, members are still likely to benefit from the economies of scale that arise from the sharing of dwellings. Therefore household income measures are often used for the analysis of people's economic wellbeing.

Larger households usually require a greater level of income to maintain the same material standard of living as smaller households, and the needs of adults are usually greater than the needs of children. The income estimates are therefore adjusted by equivalence factors to standardise them for variations in household size and composition, while taking into account the economies of scale that arise from the sharing of dwellings. The resultant estimates are known as equivalised disposable household income (EDHI). EDHI is calculated by adjusting disposable income by the application of an equivalence scale. This adjustment reflects the requirement for a larger household to have a higher level of income to achieve the same standard of living as a smaller household. Where disposable income is negative, it is set to zero EDHI.

When household income is adjusted according to an equivalence scale, the EDHI can be viewed as an indicator of the economic resources available to a standardised household. For a lone person household, it is equal to income received. For a household comprising more than one person, EDHI is an indicator of the household income that would be required by a lone person household in order to enjoy the same level of economic wellbeing as the household in question.

The concept of EDHI is applicable to both households and the people living in those households. That is, each person in a household has the same level of EDHI as the household itself. The difference between using households or persons as the unit of analysis is discussed in the 'Housing' section of this publication.

Published SIH output includes estimates of EDHI but not estimates of 'Equivalised gross household income', although the latter can also be produced.

Table 1 shows that a couple household with one child would need \$1,800 weekly disposable income to have the same equivalised disposable household income as a lone person household with a disposable income of \$1,000.

TABLE 1 EXAMPLES OF EQUIVALISED INCOME

Household composition	Equivalising factor (x) no.	Disposable income (y) \$	Equivalised disposable income (y/x) \$
Lone person	1.0	1 000	1 000
Couple only	$(1 + 0.5) = 1.5$	1 500	1 000
Couple with one child under 15 years	$(1 + 0.5 + 0.3) = 1.8$	1 800	1 000
Group household with three adults	$(1 + 0.5 + 0.5) = 2.0$	2 000	1 000

Equivalence scales are mainly used for household income, but can also be used for household wealth and expenditure.

COMPONENTS OF INCOME

Income in the SIH and HES is collected in separate components. This section of the publication explains the definitions used for each of those components, and also describes some components of income that are not included in the aggregate income measures included in SIH publications. Data for some of the excluded components are available from the surveys. Each of the detailed income data items and the aggregate measures of income are included in the data item list, which will be available from the 'Downloads' tab of this publication.

The ABS revised its standards for household income statistics following the adoption of new international standards in 2004 and a review of aspects of the collection and dissemination of income data. Income estimates from 2007–08 applied the new income standards which are reflected in the following definitions of the components of income.

More details on the nature and impact of the change in income measures are available in Appendix 4 'Improvements to income statistics' in the Information Paper: Survey of Income and Housing, User Guide, Australia 2007–08 (cat. no. 6553.0).

Employee income

Employee income is collected in the SIH and HES from each person aged 15 years and over who worked for an employer or in his/her own limited liability business. It comprises all payments received by individuals as a result of their current or former involvement in paid employment.

The aggregate current income estimates produced from the SIH and HES include the usual pay that respondents received in the most recent pay period. They include wages and salaries, amounts salary sacrificed, tips, commissions, piecework payments, penalty payments and shift allowances, remuneration for time not worked (e.g. sick and holiday pay) and workers' compensation paid through the payroll. In addition, other components such as non-cash benefits, bonuses, termination payments and payments for irregular overtime worked are all included.

The aggregate annual income estimates produced from the SIH and HES include total income from all jobs in the financial year prior to the survey. These will not be collected or output from 2017-18 cycle of SIH onwards for most income sources.

Own unincorporated business income

Own unincorporated business income is collected from all persons aged 15 years and over who are working as owners or partners in unincorporated enterprises. Own business income is the share of the profit/loss of the enterprise accruing to the person. Profit/loss consists of the value of the gross output of the enterprise after the deduction of operating expenses and an allowance for depreciation of assets used in producing the output. Losses occur when operating expenses and depreciation are greater than gross receipts and are treated as negative incomes.

Since profit or loss calculations are often only made by businesses on a quarterly or annual basis, it is not possible to collect data on current income in the same way as can be done for employee income or current cash transfer income. Instead, survey respondents are requested to provide an estimate of their own business income they expect to receive in the current financial year. Responses are likely to be less accurate when collected early in the year and more accurate when collected later in the year, and there is some likelihood that responses will be too optimistic or too pessimistic, resulting in some bias in the aggregate estimate. However, this methodology gives better results than the methodology used in surveys up to and including 2002–03 that simply extrapolated reported own business income from the previous financial year onto the current period. Under the previous methodology, estimates could also have a strong downwards bias - particularly for new businesses - but could also be significantly upwardly biased if the current business circumstances had turned down from the previous year.

Investment income

Investment income includes interest and dividend income received as a result of the ownership of financial assets such as bank accounts and shares, and rent and royalty income received from the ownership of non-financial assets. The 2015–16 SIH and HES also includes income from offset accounts, which is an estimate of the amount households saved in interest on their loans, as a component of income.

The rent component of investment income is measured on a net basis, that is, gross rent less operating expenses and depreciation allowances. Interest paid on money borrowed to purchase shares or units in trusts is also deducted from income earned from these sources giving a net income earned from such investments. All other components, for which associated expenses are normally relatively small, are on a gross basis.

Rent comprises receipts from residential properties, other than owner-occupied dwellings, and from non-residential properties. Operating expenses deducted from gross rent include a range of dwelling related expenses such as repairs and maintenance expenses, rates and interest payments. If the operating expenses plus depreciation allowances are greater than the gross rent, net rental income is negative.

Current investment income is collected by asking survey respondents for an estimate of their total expected income in the financial year, as described above for own unincorporated business income.

Government pensions and allowances

Government pensions and allowances are cash transfer payments made by government entities to persons under social security and related government programs. They are primarily paid by Centrelink or the Department of Veterans' Affairs, and include pensions paid to aged persons, benefits paid to veterans and their survivors, study allowances for students, Family Tax Benefit (FTB), etc.

Some government payments are excluded from income as they are considered to be either a reimbursement of

expenditure or a capital transfer. In deciding whether a government payment should be included in income, the intent of the government payment is considered. Government payments considered to be reimbursements of expenditure, including the Medicare rebate, Child Care Rebate (CCR) and Child Care Benefit (CCB), are not included as income; they are instead included as social transfers in kind (for more information see the 'Social Transfers in Kind' section of this publication). Payments considered to be capital transfers are also not included as income. Examples of capital transfers include the First Home Owner Grants Scheme, as it is designed to help first home buyers purchase their own home, and the aged persons' savings bonus and self-funded retirees' supplementary bonus (paid as part of the introduction of The New Tax System in 2000–01) as they were designed to help retired people maintain the value of their savings and investments following the introduction of the GST.

The Baby Bonus (formerly known as the Maternity Payment) introduced in July 2004, is included as income, recognising that the intention of the payment is to offset some of the extra consumption costs incurred with the birth of a child. Similarly, Child Disability Assistance Payment paid to recipients of Carer Allowance, is also included as part of income. The Baby Bonus was replaced from 1 March 2014 with the Newborn Supplement and Newborn Upfront Payment, and paid as part of Family Tax Benefit Part A for children who were born, taken into care for at least 13 weeks, or placed for adoption after 1 March 2014.

Paid Parental Leave, introduced on 1 January 2011, is also included as income as per the Baby Bonus. Under the Paid Parental Leave scheme, eligible working parents can get government funded pay when they take time off from work to care for a newborn or recently adopted child. The income test for paid parental leave requires that the parent or parents earn no more than \$150,000 in the year previous to the child's birth. People who meet the eligibility requirements must decide which payment, paid parental leave or Baby Bonus, is best suited to them, as both payments cannot be received for the same child.

Dad and Partner Pay is an entitlement under the Paid Parental Leave Scheme paid directly to a working dad or partner who cares for a child born or adopted from 1 January 2013. Dad and Partner Pay up to two weeks of government-funded pay at the rate of the National Minimum Wage. The Dad and Partner Pay can be taken all at once at any time in the first year after birth or adoption.

The Clean Energy Advance, now known as the Energy Supplement, paid from March 2013 and January 2014 is included in income from government pensions or allowances. This tax-exempt, indexed payment was paid to pensioners, other income support recipients, families receiving Family Tax Benefit payments and Seniors Supplement recipients, provided they meet eligibility requirements.

Also included in income from government pensions and allowances is the biannual Schoolkids bonus payment that is being paid to eligible families, carers and students from January 2013 to the end of 2016. This biannual payment, paid in January and July, was made payable to families receiving Family Tax Benefit Part A, plus young people in school receiving Youth Allowance and other income support and veterans' payments, providing they met the age and education requirements.

Values of FTB paid as a lump sum and one-off payments regarded as income are annualised, that is, treated as though they were paid evenly through the year. Therefore the amount included in current weekly income is the total payment for the year divided by 52.14, the average number of weeks in a year. The payments are assigned to all respondents who would have met the eligibility criteria at the time that they were interviewed, even if the payments were only announced after the interview took place. If an annualised approach was not taken, a few respondents receiving the benefit would include a large amount in the current income, and most people eligible for the benefit would not include any payment because it was not received in the fortnight before the interview.

All pensions received from overseas are included under government pensions and allowances.

Other income

Other income includes non-government pensions such as superannuation and life insurance pensions, regular annuity benefits, private scholarships or study allowances, workers' compensation not paid through the payroll, child support payments (non-government), income from accident/sickness insurance, and other current transfers received from family members living in other households, such as parental allowances paid to students living away from home.

Note that, while child support and financial support received from other family members not living in the same household are included in the income of the households receiving the transfers, they are not deducted from the disposable income of the households making the transfers.

Workers' compensation payments are made to injured employees to compensate for foregone earnings and to meet ongoing medical costs. While regular workers' compensation receipts have been included in previously published results, lump sum receipts were not. Commencing in the 2007–08 SIH, both forms of workers' compensation are included in the published estimates.

A cut-off has been applied to significant lump sum amounts, where it was considered likely that part of the receipt

would be saved to meet future expenses, rather than to support current consumption. Two methods were applied in determining the cut-off limit. For respondents who reported some employee income, the cut-off was applied at the equivalent of three months pay, based on the greater of the respondent's reported employee income and average weekly earnings. For those reporting no employee income, the cut-off was applied at the equivalent of 52 weeks average weekly earnings.

Most severance, termination and redundancy payments and payments for unused leave are relatively small amounts, but some very large amounts were reported in 2015–16. These were treated in the same manner as the reported large amounts in each cycle from 2007–08 SIH, that is, an adjustment was applied on the basis of the current weekly income that would have been earned over a three-month period which was calculated to be the average time of unemployment between jobs. Amendments were made to both current financial year and previous financial year data if required.

Income tax and Medicare levy

In 2015–16, estimates of income tax, the Medicare levy and the Medicare levy surcharge relate to the liability associated with the income being reported by respondents, regardless of when it is actually paid. In other words, an accrual rather than cash-based concept is used.

Income tax is modelled for all households using the relevant taxation criteria and the income and other characteristics of household members reported in the survey.

LOW AND LOWER INCOME HOUSEHOLDS

The economic wellbeing of households with very low incomes is of particular interest to social policy researchers and analysts. The 2015-16 outputs from the SIH use the same definition of 'Low income' and 'Lower income' households that were adopted for the 2013-14 SIH. Further information relating to the reasons for the changes can be found in the 'Income' chapter of Survey of Income and Housing, User Guide, Australia, 2013-14 (cat. no. 6553.0).

Low income households

Analysis of 'Low income' households is presented in Household Income and Wealth, Australia, 2015–16 (cat. no. 6523.0).

'Low income' definition (new in 2013–14 SIH)

The new definition of 'Low income' households are those with incomes in the 3rd to 20th percentiles of equivalised disposable household income, that is, the lowest income quintile excluding the bottom two percentiles. Estimates for this population in the relevant data cubes are labelled 'Adjusted lowest income quintile'.

The time series data presented from 1994–95 to 2015–16 in the publication Household Income and Wealth, Australia, 2015–16 (cat. no. 6523.0) uses the updated definition.

'Low income' definition (previous)

Prior to the 2013–14 SIH, 'Low income' households were defined as those in the second and third deciles of equivalised disposable household income, that is, it excluded all households in the lowest income decile. Estimates for this population in the relevant data cubes in survey outputs up to 2011–12 SIH are labelled 'Second and third deciles'.

Lower income households

Analysis of 'Lower income' households is presented in the publication Housing Occupancy and Costs, Australia (cat. no. 4130.0).

'Lower income' definition (new in 2013–14 SIH)

The new definition of 'Lower income' households are those with incomes in the 3rd to 40th percentiles of equivalised disposable household income, that is, the lowest two income quintiles excluding the bottom two percentiles. This new definition therefore covers 38% of the total population.

'Lower income' definition (previous)

Prior to the 2013–14 SIH, 'Lower income' households were defined as those with equivalised disposable household income between the 10th and 40th percentiles, that is, it excluded all households in the lowest income decile. This old definition therefore covered 30% of the total population.

LOW ECONOMIC RESOURCE HOUSEHOLDS

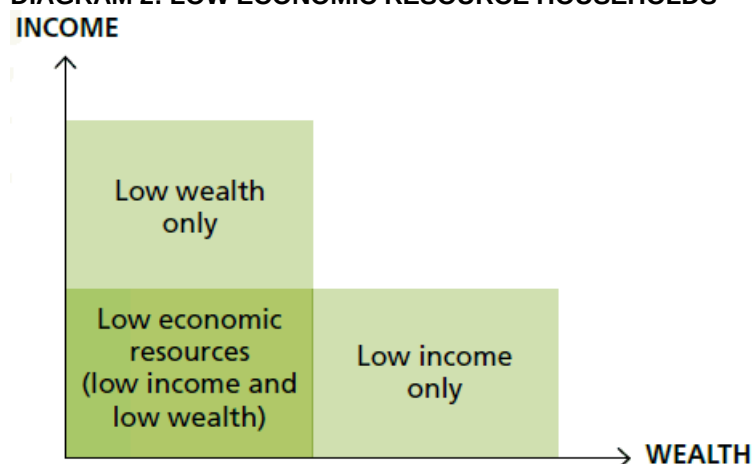
There are many factors that influence whether people are experiencing economic hardship. People living in households with low economic resources, i.e. low income and low wealth, are considered most at risk of experiencing economic hardship, particularly if their income falls or they have substantial unexpected expenses.

The ABS has developed a low economic resource (LER) measure that includes people who are simultaneously in the lowest four deciles of both equivalised disposable household income (including private imputed rent) and equivalised household net worth. It therefore excludes people with either relatively high incomes or relatively high wealth.

The LER measure classifies around 20% of people in low income, low wealth households, although the actual proportion will vary over time as the joint distribution of income and wealth changes. It does not identify whether these people are actually experiencing economic hardship.

One of the strengths of this measure is its ability to contrast the characteristics of the LER population with those in the low income and low wealth quintiles.

DIAGRAM 2: LOW ECONOMIC RESOURCE HOUSEHOLDS



Analysis of the expenditure of low economic resource households is available in the feature article and data cube in the Household Expenditure Survey, Australia, Summary of Results, 2015-16 product.

Analysis of low economic resource households is also available in the Household Economic Wellbeing 'Fact sheet 3. Low economic resource households' and the feature article 'Low Economic Resource Households' in the publication Household Income and Income Distribution, Australia, 2011-12 (cat. no. 6523.0). The 2015-16 SIH LER data will be released with the imputed rent estimates available in late 2017.

Wealth or Net worth

WEALTH OR NET WORTH

WEALTH FRAMEWORK

Wealth refers to economic resources in the form of the balance of assets and liabilities held by members of a household. The value of wealth, or net worth, is measured at a point in time, and is therefore a stock concept.

Wealth data from the Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) are compiled in accordance with internationally agreed guidelines for producing micro statistics on household wealth, as reflected in the OECD Guidelines for Micro Statistics on Household Wealth (OECD, 2013). This publication provides an internationally agreed set of standard concepts, definitions and classifications for micro wealth statistics and best practice for compiling and analysing wealth statistics.

COMPONENTS OF WEALTH

Wealth is comprehensively collected in the SIH and HES. Common assets and liabilities are collected through detailed questions, and uncommon items are able to be identified and valued through questions about 'other assets' and 'other liabilities' not otherwise identified.

Assets

An asset can be viewed as a store of value that provides a benefit or series of benefits accruing to the economic owner by holding or using the asset over a period of time. Assets may be financial or non-financial.

Financial assets include:

- accounts in financial institutions, such as bank deposits and offset accounts;
- superannuation accounts;
- listed and unlisted shares and trusts;
- the value of own unincorporated businesses; and
- the outstanding value of loans made to persons in other households or to businesses.

Non-financial assets include:

- residential and non-residential properties and land, not part of an unincorporated business;
- consumer durables that are used repeatedly and for more than one year, such as vehicles, household furniture and appliances, clothes and other personal items;
- art work and other collectibles; and
- intangible fixed assets such as intellectual property and computer software.

Liabilities

A liability is established when one unit (the debtor) is obliged, under specific circumstances, to provide a payment or series of payments to another unit (the creditor). All liabilities are financial in nature, and for all financial assets held by a household there is a corresponding liability held by another party.

Liabilities are primarily the value of loans outstanding including:

- mortgages;
- borrowings from other households;
- investment loans;
- credit card debt; and
- debt on other loans such as personal loans to purchase vehicles, and study loans.

In the SIH and HES, most assets and their related liabilities are collected separately, e.g. the estimated value of dwellings (owner-occupied and other property) are collected independently of the value of loans associated with these dwellings.

Asset and liability data can be collected on a net basis rather than collecting the value of each component. For the SIH and HES, if a survey respondent owns or partly owns a business, they are asked how much they would receive if they sold their share of the business and paid off any outstanding debts. Therefore, the value of the assets and debt held by these businesses cannot be separately reported. This is the only type of asset collected on a net basis for the SIH and HES.

While some assets, e.g. bank accounts, are collected from each person in households selected in the SIH and HES, other assets and liabilities are collected from the household in total, including property and loans. Therefore, it is not possible to produce person level estimates of the total assets and liabilities owned by households.

Mean values of the detailed assets and liabilities collected in the SIH are available in the publication Household Income and Wealth, Australia, 2015–16 (cat. no. 6523.0).

DERIVATION OF WEALTH/NET WORTH

Household wealth is represented by the household's net worth. Net worth is calculated as the difference between the stock of household assets and the stock of household liabilities. Net worth is positive when the value of household assets is more than the value of household liabilities. Likewise, net worth is negative when household liabilities exceed household assets.

While there may be individual ownership of assets, the benefit of asset ownership is shared at least to some extent

between members of the household. Therefore, for analysis of the economic wellbeing of both individuals and households, net worth of households is most appropriate.

EQUIVALISED NET WORTH

Wealth is often built up during a person's working life and then used during retirement when the composition of the household might be quite different. Therefore, unlike income, the main measure of household wealth, or net worth, is unequivalised. For this reason, any wealth analysis should take into account the impact of the population's age distribution. The age at which wealth is accrued is also important - due to the impact of compound interest or compounding value over time for many assets and liabilities. For more information see the 'Income' section of this publication.

However, when wealth is being used to support current consumption, or to identify households at risk of economic hardship, household wealth should be equivalised with the same scale used to equivalise household income and consumption. Equivalised household net worth is used in the ABS *low economic resource* measure and, for comparison purposes, is included in a small number of tables in output from the SIH and HES.

LOW WEALTH HOUSEHOLDS

Low wealth households are those in the bottom quintile of household net worth. This includes households with nil or negative net worth.

DEBT RATIOS

Household debt can support the purchase of capital assets such as a dwelling or vehicle, or can provide short-term funds if a household experiences an unexpected large expense. However, high debt levels can leave households vulnerable to financial hardship if their economic circumstances change.

Analyses on debt ratios have been included in the output presented in the publication *Household Income and Wealth, Australia, 2015-16* (cat. no. 6523.0). Two ratios are presented:

- debt to disposable income; and
- debt to assets.

Debt to disposable income ratios

Debt to income ratios focus on the ability of households to meet their ongoing obligations to service their debts, such as mortgage payments, student or car loan repayments or credit card repayments.

Debt to income ratios are calculated as: total household debt divided by annualised disposable household income. Debt to income ratios can also be calculated using gross household income.

The ABS has chosen disposable income for use in debt ratios as it is the income available to households to meet their expenditure needs after paying their tax obligations, and therefore the income available to service their debt. Households with nil and negative income are included in the ratios. For this purpose they are allocated a nominal annualised disposable income of 10 cents. Households with zero or negative debt are not included in the calculation.

Consistent with the Organisation for Economic Cooperation and Development (OECD) definition of over-indebted households, estimates have also been provided of the proportion of households with debt three or more times their income.

Debt to asset ratios

Debt to asset ratios show the proportion of a household's debt compared to the value of its assets. Households with high debts compared to their assets are considered at higher risk of financial hardship if there was a sudden change in asset values, e.g. if house prices were to fall substantially.

The debt to asset ratio has been calculated as: household total debt divided by household total assets. Households with nil or negative total assets, such as those with a business that has liabilities greater than the value of its assets, are included in the ratios. For this purpose they are allocated a nominal total asset value of 10 cents. Households with zero or negative debt are not included in the calculation.

Consistent with the OECD definition of over-indebted households, estimates have also been provided of the proportion of households with debt worth 75% or more of the value of their assets.

CHANGES ACROSS CYCLES

The value and detailed composition of the wealth of households has been collected in the SIH since 2003–04, in all survey cycles except for 2007–08.

There have been some changes between surveys to improve measures of household wealth, in particular:

- prior to the 2009–10 SIH, the value of a household's trusts were collected as a combined total. From 2009–10, the value of public unit trusts and private trusts have been collected separately;
- the value of silent partnerships has been specifically collected since the 2009–10 SIH; and
- the value of offset accounts has been specifically collected since the 2011–12 SIH.

The value of children's assets has not be collected since 2011-12.

In 2011–12 SIH output, the classification of assets was changed to align with the new OECD Wealth Guidelines. The main change compared to the classification used in output from previous SIH cycles was that the value of own unincorporated business (net of liabilities) and the value of silent partnerships became financial assets whereas previously they had been treated as non-financial assets.

Prior to 2013–14, household wealth estimates were published in the publication Household Wealth and Wealth Distribution, Australia (cat. no. 6554.0). Since 2013–14, detailed wealth data from the SIH have been published in the publication Household Income and Wealth, Australia, 2015–16 (cat. no. 6523.0).

FORTHCOMING CHANGES TO WEALTH DATA COLLECTION

From the 2017-18 SIH onwards, credit card balances and student loans will be collected on the Individual Form in SIH - from each person aged 18 years or over for credit card balances, and all persons aged 15 years or over for student loans. It is expected that this change will improve reporting of these liabilities.

COMPARISON OF WEALTH BETWEEN SIH AND THE AUSTRALIAN SYSTEM OF NATIONAL ACCOUNTS

While the concepts of net worth used in the SIH have many similarities to the household net worth definition used in the Australian System of National Accounts (ASNA), they also differ in many respects.

The SIH wealth data are collected from households and can be used to analyse the distribution of wealth across the population and to compare levels of wealth between various population subgroups. The ASNA estimates net worth by using many different data sources and provides a comprehensive picture of the household sector as a whole, presented within a national accounting framework.

A comparison of wealth data in the SIH and the ASNA has been published since the 2005–06 SIH. A detailed comparison of 2003–04, 2005–06, 2009–10 and 2011–12, SIH and ASNA net worth estimates is available in the publication Household Wealth and Wealth Distribution, Australia, 2011–12 (cat. no. 6554.0). From 2013-14, this analysis is featured in the User Guide. The 2015-16 analysis will be available as a supplementary release to this user guide later in 2017.

Housing

HOUSING

The SIH and HES contain a wide range of variables that directly relate to many aspects of people's housing. These include tenure, dwelling structure, and number of bedrooms. Others will be outlined in more detail below.

HOUSING COSTS

Housing costs are regular outlays made by household members in providing shelter for themselves. The data collected on housing outlays in the SIH are limited to major outlays on housing, i.e. mortgage repayments, rent, property and water rates as well as body corporate fees.

Only payments that relate to the dwelling occupied by the household at time of interview, i.e. a respondent's usual

place of residence, are included. Housing costs only include mortgage/loan repayment if the purpose of the loan at the time it was initially taken out was primarily to buy, build, add to, or alter the occupied dwelling.

There are a number of limitations with the housing costs information obtained in the SIH, due to practical data collection considerations. These limitations should be especially borne in mind when comparing the housing costs of different tenure and landlord types, i.e. when comparing the costs of owner occupiers with the costs of renting households, and when comparing the costs of households renting from state and territory housing authorities with the costs of other renters.

- Some households are reimbursed some or all of their housing costs. Commonwealth Rent Assistance (CRA), paid by the Australian Government to qualifying recipients of income support payments, is an important type of reimbursement of relevance to these statistics.
- Mortgage repayments made by owners with a mortgage include both the interest component and the principal or capital component. For many purposes it is more appropriate to consider repayments of principal as a form of saving rather than as a recurrent housing cost. It reflects the purchase of a housing asset by increasing the equity in the property held by the household and is an addition to the wealth of the occupants.
- A fuller measure of housing costs would include a range of outlays not collected in the SIH but which are necessary to ensure that the dwelling can continue to provide an appropriate level of housing services. These include repairs, maintenance and dwelling insurance, and are costs that tend to be incurred by owner occupier households but not by renting households. These additional costs are measured in the HES.

HOUSING COSTS AND HOUSEHOLD INCOME

Housing costs are often a major component of total living costs. Therefore housing costs are often analysed as a proportion of total income, sometimes referred to as affordability ratios. However, comparisons between these measures are subject to the limitations of housing cost estimates obtained in the SIH that are described in the previous paragraph. Housing affordability ratios derived from SIH data are further impacted by the inclusion of CRA in the value of income collected.

To illustrate the difficulties discussed above, consider two households that are renting their dwellings. Both receive government pensions of \$400 per week. One rents from a public housing authority and pays rent of \$100 per week. The other pays \$135 rent per week to a private landlord and receives CRA of \$35. In SIH, the housing costs of the latter household would be recorded as \$135 and their income would be recorded as \$435. The household renting from the public housing authority has a housing costs/income ratio of 25%. The housing costs/income ratio for the latter household would be derived as 31%. If CRA receipts are excluded from housing costs and income, the housing costs/income ratio for the latter couple is also 25%, highlighting that there is no substantive difference between the housing costs or income situation of the two couples. The treatment of CRA is of particular concern when considering changes in affordability ratios over time, since there has been a shift from providing public housing to providing CRA as a means of supplying affordable housing to low income people.

While housing costs can be a major component of total living costs, the difference between the housing costs of a larger household and a smaller household would not be expected to be as great as the difference in many other costs, such as food or clothing. In other words, larger households can be expected to experience economies of scale in the supply of housing. This means that if a larger household and smaller household both have the same standard of living, it could be expected that on average the larger household will have a lower housing cost to income ratio. Therefore relatively high housing cost to income ratios are more of a concern with respect to larger households than smaller households. This should be borne in mind when comparing ratios across different household sizes.

In comparing households' housing costs with their income, it should be noted that households have a variety of housing preferences. Some people may choose to live in an area with high land values because it is close to their place of employment and therefore they have lower transport costs. Some people choose to incur relatively high housing costs because they prefer a relatively high standard of housing to other consumption or investment choices. High mortgage repayments might reflect a choice to purchase a relatively expensive home, or pay off a mortgage relatively rapidly, as a form of saving.

HOUSING AFFORDABILITY

One way of examining housing affordability is to look at households whose spending on housing is likely to impact on their ability to afford other living costs such as food, clothing, transport and utilities. A common threshold applied is the proportion of households spending more than 30% of their income on housing costs.

Higher income households have greater capacity to spend a high proportion of their income on housing without impacting their ability to meet other living costs. Accordingly, a 30% housing costs threshold is commonly applied to those households whose equivalised disposable household income falls in the bottom 40% of Australia's income distribution. This is commonly referred to as the '30/40 rule' of housing affordability. Lower income households that

spend more than 30% of their gross income on housing costs are sometimes referred to as being in 'housing stress'.

Most affordability measures, including the 30/40 rule, exclude households that report nil or negative income. The 30/40 rule may also exclude those reporting extremely low incomes, such as those in the bottom 2% of the equivalised disposable household income distribution, as data suggests this group includes households with temporarily low or irregular incomes, or accumulated wealth that supports their consumption.

Measures of housing affordability are often restricted to renters as the nature of mortgage repayments can make affordability analysis of owners with a mortgage difficult.

HOUSING UTILISATION

The concept of housing utilisation applied in the SIH and HES is based upon a comparison of the number of bedrooms in a dwelling with a series of household demographics such as the number of usual residents, their relationship to one another, age and sex. There is no single standard measure of housing utilisation. However, the Canadian National Occupancy Standard (CNOS) is applied in the SIH and HES and is widely used internationally.

The CNOS is sensitive to both household size and composition. The measure assesses the bedroom requirements of a household by specifying that:

- there should be no more than two persons per bedroom;
- children less than five years of age of different sexes may reasonably share a bedroom;
- children less than 18 years of age and of the same sex may reasonably share a bedroom;
- single household members 18 years and over should have a separate bedroom, as should parents or couples; and
- a lone person household may reasonably occupy a bed sitter.

The CNOS variable compares the number of bedrooms required with the actual number of bedrooms in the dwelling. Households living in dwellings where this standard cannot be met are considered to be overcrowded.

From 2017-18 onwards, the number of part-time resident children in each household will be collected in the SIH. It is expected that this information will provide additional detail in regards to housing utilisation.

ABS RELEASES

Summary housing data from SIH 2015–16 will be released in the publication Housing Occupancy and Costs, Australia (cat. no. 4130.0).

Summary indicators of income and wealth distribution

SUMMARY INDICATORS OF INCOME AND WEALTH DISTRIBUTIONS

INTRODUCTION

There are many ways to illustrate aspects of the distribution of income and wealth, and to measure the extent of inequality. In the Survey of Income and Housing (SIH), five main types of indicators are used - means and medians, frequency distributions, percentile ratios, income and wealth shares, and Gini coefficients. This part of the publication describes how these indicators are derived.

Analysis of both income and wealth provides the most complete understanding of how economic resources are distributed across the population.

ANALYSIS OF HOUSEHOLDS AND PERSONS

There are two common ways of presenting analysis of households:

- number of households, or
- number of people in households.

In the former, each household contributes the same regardless of its size e.g. a four person household would have the same representation as a person living alone. These are called household weighted estimates.

To provide a better understanding of the circumstances of people it is often preferable to study people in households e.g. the number of people in Australian households experiencing economic hardship. In this analysis, each person is attributed with the characteristics of the household to which they belong e.g. household income is used to determine whether it is a low or high income household but analysis is about numbers of people experiencing hardship. This approach keeps the focus on individual circumstances while recognising that people share household resources. The main income measure used in SIH publications is equivalised disposable household income, while the main wealth measure is net wealth of household. When data are equivalised, the means and medians are person weighted. Most estimates that are not equivalised, are household weighted. The exception is in tables that refer to 'household characteristics of persons' or 'persons in households'. These estimates are person weighted.

SUMMARY MEASURES

Counts

Counts provide an estimate of the total number of people or households with a particular characteristic and are derived by summing the survey weights of each observation of interest. In sample surveys the weights enable extrapolation of the survey responses to official population estimates.

Means and medians

Mean (average) and median (the midpoint when all persons or households are ranked in ascending order) are simple indicators that can be used to show income and wealth differences between subgroups of the population.

Mean

The mean, or average, value of a data item is calculated by multiplying the value of the data item for the population of interest in each record by the weight of the record and summing the resultant products, and then dividing the total by the sum of the weights of the records. For example, the mean gross income of Queensland households is the weighted sum of the gross income of each such household divided by the sum of the weights relating to each such household.

Advantages of the mean are that it is easy to calculate and the means of all subcomponents sum to the mean of all observations. Its drawbacks are the effect of extreme values and asymmetry of the distribution, both of which are relevant for income and wealth data. For example, a small number of very wealthy and a large number of relatively poor households may have the same average income or wealth as a population where there is equal distribution of resources.

Median

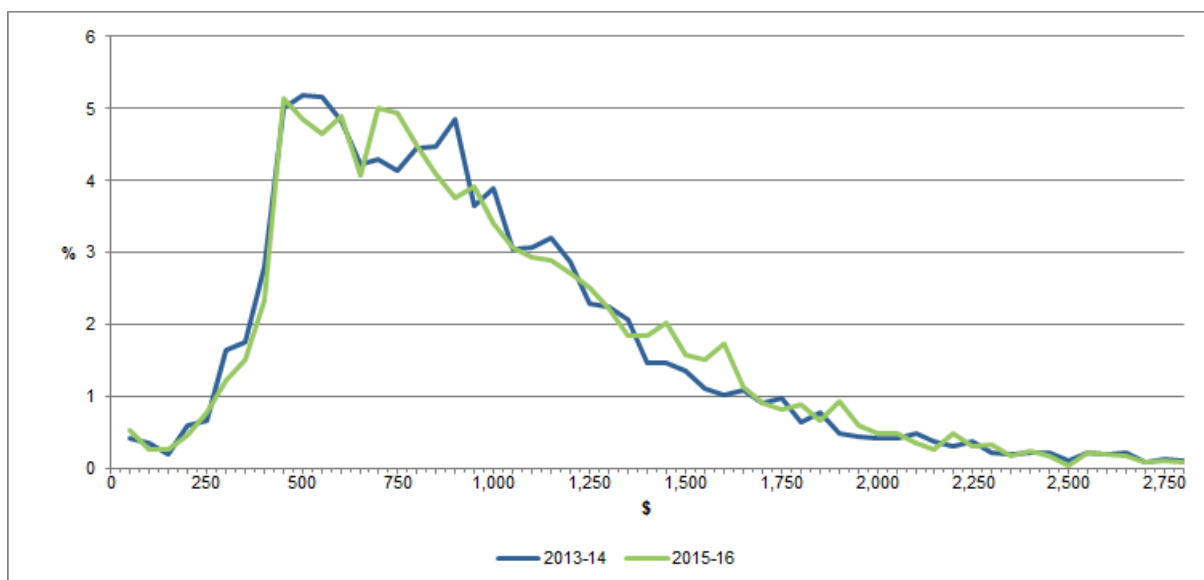
Medians divide the population of interest into halves. To identify the median record, the population is first ranked in ascending order according to the data item of interest. Except for person weighted measures of household variables, the weights of the records are then accumulated until half the population is accrued. The record at which this occurs is the median record, and its value for the data item of interest is the median value. For person weighted measures of household variables, the household weights are multiplied by the number of persons in the household before accumulation.

Compared to the mean, the median is a more stable measure and is less affected by extreme values and sample fluctuations. However, median values of subcomponents do not sum to the median of all observations.

FREQUENCY DISTRIBUTION

A frequency distribution illustrates the location and spread of income and wealth within a population. It groups the population into classes by size of household income or wealth, and gives the number or proportion of people in each income or wealth range. A graph of the frequency distribution is a good way to portray the essence of the income or wealth distribution. Graph 1 shows the proportion of people within \$50 household income ranges.

Graph 1 - DISTRIBUTION OF HOUSEHOLD INCOME(a), 2013-14 to 2015-16



Annotation(s): Persons with an income between \$50 and \$2,800 are shown in \$50 ranges on the graph

Footnote(s): (a) Equivalised Disposable Household Income, weekly

Source(s): ABS Survey of Income and Housing, 2013–14, 2015–16

Frequency distributions can provide considerable detail about variations in the income or wealth of the population being described, but it is difficult to describe the differences between two frequency distributions. They are therefore often accompanied by other summary statistics, such as the mean and median. Taken together, the mean and median can provide an indication of the shape of the frequency distribution. As can be seen in the Graph 1, above, the distribution of income tends to be asymmetrical, with a small number of people having relatively high household incomes and a larger number of people having relatively lower household incomes. The greater the asymmetry, the greater will be the difference between the mean and the median. The small number of very high values raises the mean, while the median is not impacted by extreme values.

QUANTILE MEASURES

When persons (or any other units) are ranked from the lowest to the highest on the basis of some characteristic such as their household income or wealth, they can then be divided into equally sized groups. The generic term for such groups is quantiles.

Quintiles, deciles and percentiles

When the population is divided into five equally sized groups, the quantiles are called quintiles. If there are 10 groups, they are deciles, and division into 100 groups gives percentiles. Thus the first quintile will comprise the first two deciles and the first 20 percentiles.

SIH publications frequently present data classified into income or wealth quintiles, supplemented by data relating to those with incomes in the 3rd to 20th percentiles of equivalised disposable household income, i.e. the lowest income quintile excluding the bottom two percentiles. The latter is included to enable quintile-style analysis to be carried out without undue impact from very low incomes which may not accurately reflect levels of economic wellbeing. Estimates for this population in the relevant data cubes are labelled 'Adjusted lowest income quintile'.

Equivalised disposable household income and equivalised net wealth of household are some of the measures used to define the income and wealth quantiles shown in SIH publications, and the quantiles each comprise the same number of persons, that is, they are person weighted.

Gross household income and net worth of household are other measures used to define the income and wealth quantiles in these publications, and the quantiles each comprise the same number of households, that is, they are household weighted.

Upper values, medians and percentile ratios

In some analyses, the statistic of interest is the boundary between quantiles. This is usually expressed in terms of the upper value of a particular percentile. For example, the upper value of the first quintile is also the upper value of the twentieth percentile and is described as P20. The upper value of the ninth decile is P90. The median of a whole population is P50, the median of the third quintile is also P50, the median of the first quintile is P10, etc.

Percentile ratios summarise the relative distance between two points on the income or wealth distribution. To illustrate the full spread of the distribution, the percentile ratio needs to refer to points near the extremes of the

distribution, for example, the P90/P10 ratio. The P80/P20 ratio better illustrates the magnitude of the range within which the income or wealth levels of the majority of the population fall. The P80/P50 and P50/P20 ratios focus on comparing the ends of the distribution with the midpoint (the median).

INCOME OR WEALTH SHARES

Income or wealth shares can be calculated and compared for each income or wealth quintile (or any other subgrouping) of a population. The aggregate income of the units in each quintile is divided by the overall aggregate income of the entire population to derive income or wealth shares.

GINI COEFFICIENT

Taken together, the simple measures of income or wealth distribution such as mean, median, percentile ratios and income shares can provide an indication of changes in the income or wealth distribution of a population over time, or differences in the income or wealth distributions of two separate populations. However, none of the simple measures comprise a single statistic that summarises the whole income or wealth distribution in a way that directly considers and compares the individual income or wealth levels of all members of the population. In SIH publications, the Gini coefficient is used to compile a single statistic of inequality by summarising the distribution of income or wealth across the population.

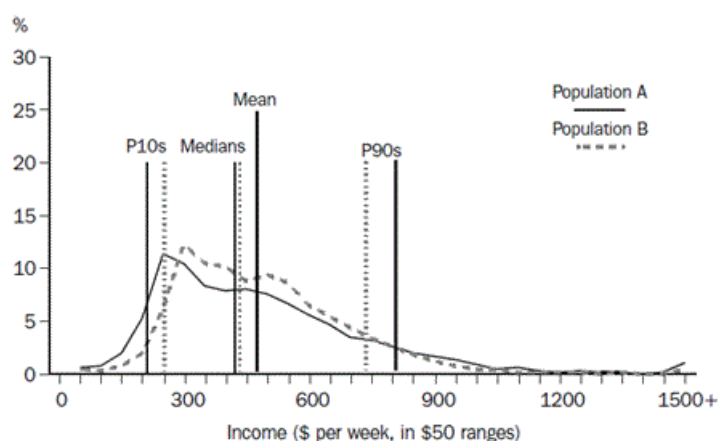
Concept of inequality

It is generally agreed that perfect equality in the distribution of income or wealth can be defined as the situation in which everyone in the population lives in a household with the same equivalised disposable household income or net worth. If any person has lower or higher equivalised disposable household income than any other person, there is inequality in the income distribution, and the same definition applies to wealth inequality. However, there is no unique, generally accepted way of summarising the degree to which a population does not have perfect equality, or, more practically, summarising the difference in inequality between two populations.

Unequal distributions of income can occur in many different ways. The majority of people may have very similar incomes with pockets of very high or very low income. Wealth, due to the effect of accrual over the life course, is generally more unequally distributed, that is, more concentrated among older persons than younger persons. Or entire populations may be heavily clustered at the top and the bottom of the income distribution with few people receiving incomes in between these extremes. To evaluate one distribution as having greater or lesser inequality than another, it is necessary to compare the distributions in terms of which segments of the population have a greater share of income and which segments have a lower share. It is then necessary to at least implicitly judge whether the relative gains by some people is more than offset or less than offset by the relative losses of other people. Different observers may make different judgments about the same situation, depending on factors including personal preferences.

For example, consider the equivalised disposable household income of the two populations A and B depicted in Graph 2, 'Frequency Distributions'. Population A is derived from the 2000–01 SIH population, while population B covers the same people as in population A, but everyone's income is transformed to reduce the proportional differences in income across the population while retaining the same mean income for the population. Therefore fewer people are on very low or very high incomes and more people are between these extremes, with the median for population B closer to the mean, and less spread between P10 and P90.

Graph 2 - FREQUENCY DISTRIBUTIONS

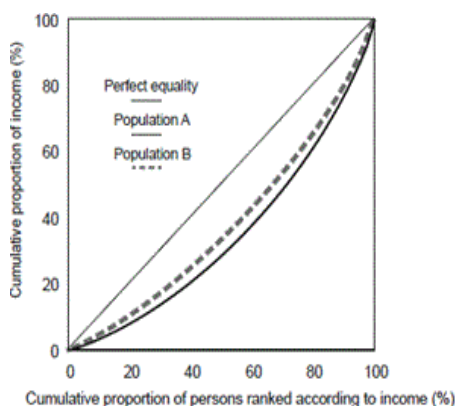


The extent to which the income distributions for populations A and B vary from equality, and from each other, can be illustrated graphically another way, using Lorenz curves.

Lorenz curves

The Lorenz curve is a graph with the horizontal axis showing the cumulative proportion of the persons in the population ranked according to their income and with the vertical axis showing the corresponding cumulative proportion of equivalised disposable household income. The graph then shows the income share of any selected cumulative proportion of the population. The diagonal line represents a situation of perfect equality, i.e., where all people have the same equivalised disposable household income. Graph 3 'Lorenz Curves' shows the Lorenz curves for the two populations described above.

Graph 3 - LORENZ CURVES



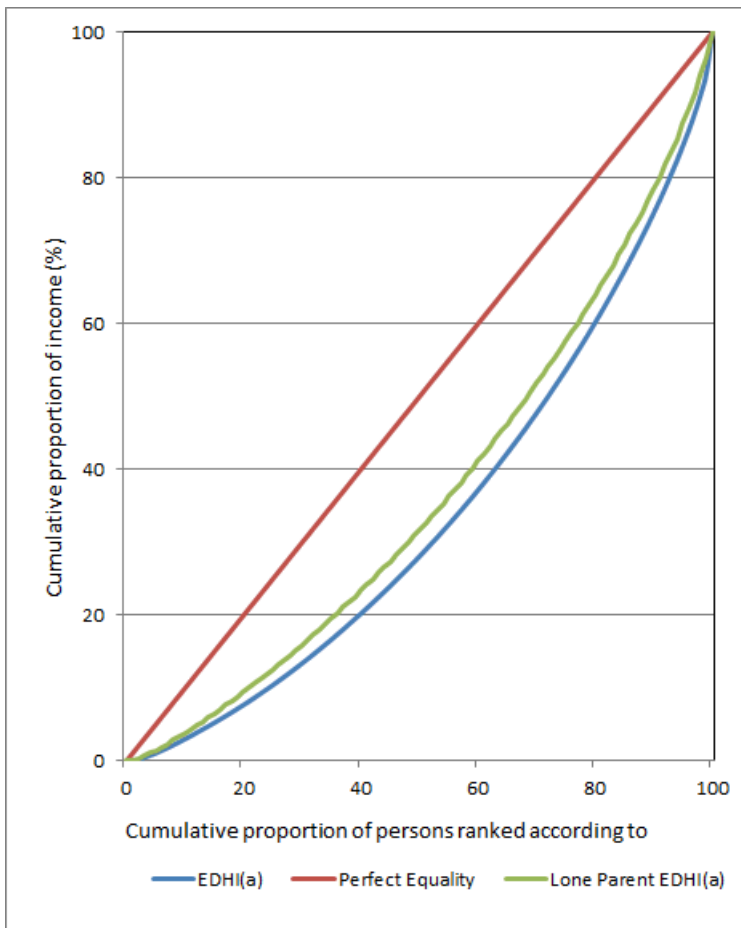
Since the distribution of population B's income is uniformly less widely spread than for population A, all points of the Lorenz curve for population B are closer to the line of perfect equality than the corresponding points of the Lorenz curve for population A. In this situation, population B is said to be in a position of Lorenz dominance and can be regarded as having a more equal income distribution than population A. However, if the Lorenz curves of two populations cross over there is no Lorenz dominance and there is no generally accepted way of defining which of the two populations has the more equal income distribution.

Gini coefficient

The Gini coefficient can best be described by reference to the Lorenz curve. It is defined as the ratio of the area between the actual Lorenz curve and the diagonal (or line of equality) and the total area under the diagonal. The Gini coefficient ranges between zero when all incomes are equal and one when one unit receives all the income, that is, the smaller the Gini coefficient the more even the distribution of income.

Normally the degree of inequality is greater for the whole population than for a subgroup within the population because subpopulations are usually more homogeneous than full populations. This is illustrated in Graph 4 below, which shows two Lorenz curves from the 2015–16 SIH. The Lorenz curve for the whole population of the SIH is further from the diagonal than the curve for persons living in one parent, one family households, with at least one dependent child. Correspondingly, the calculated Gini coefficient for all persons was 0.323 while the coefficient for the persons in the one parent households was 0.268.

Graph 4 - LORENZ CURVES 2015-16 SIH



Footnote(s): (a) Equivalised Disposable Household Income
Source(s): Survey of Income and Housing 2015-16

Mathematically, the Gini coefficient can be expressed as:

$$G = \left(\frac{1}{2n^2\mu} \right) \sum_{i,j}^n |y_i - y_j|$$

where:

n is the number of people in the population

μ is the mean equivalised disposable household income of all people in the population

and y_i and y_j are the equivalised disposable household income of the i th and j th persons in the population.

The Gini coefficient is a summary of the differences between each person in the population and every other person in the population. The differences are the absolute arithmetic differences, and therefore a difference of \$ x between two relatively high income people contributes as much to the index as a difference of \$ x between two relatively low income people.

An increase in the income of a person with income greater than median income will always lead to an increase in the coefficient, and a decrease in the income of a person with income lower than median income will also always lead to an increase in the coefficient. The extent of the increase will depend on the proportion of people that have income in the range between median income and the income of the person with the changed income, both before and after the change in income. At the extremes, increasing the income of the person with the lowest income by \$ x - or increasing the income of the person with the highest income by \$ x - will respectively decrease and increase the Gini coefficient by the same amount (assuming the lowest income person remains the lowest income person after the change).

The Gini coefficient is sometimes criticised as being too sensitive to relative changes around the middle of the income distribution. This sensitivity arises because the derivation of the Gini coefficient reflects the ranking of the population, and ranking is most likely to change at the densest part of the income distribution, which is likely to be around the middle of the distribution.

The Gini coefficient is the only single statistic summary of income distribution included in the SIH publications. The

Gini is preferred over other summary measures because it is not overly sensitive to the very low income or wealth values that can be reported, and it is relatively simple to interpret.

Expenditure

EXPENDITURE

The HES produces estimates of average household expenditure on goods and services and selected other payments.

Acquisitions, payments and consumption approaches

Expenditure can be measured according to the following approaches:

- In the acquisitions approach, the full cost payable by the household of acquiring a good or service within a given period is collected. The full cost is collected regardless of whether the household actually paid for or consumed the good or service within the period.
- In the payments approach, the payments made by the household within a given period are collected. Payments include those made on outright purchases, deposits and loans for goods and services regardless of whether the goods and services were acquired or consumed during the period.
- In the consumption approach, an indicator of consumption is collected and a dollar value is derived. Consumption values are collected according to the use of a good or service during the given period regardless of whether the good or service was acquired or paid for during the period.

The HES has primarily adopted an acquisitions approach.

For many items, such as perishable foods (which are usually acquired, paid for and completely used within a relatively short period of time) the three approaches will provide nearly identical results. For other items such as durable items and items purchased on credit that are not fully consumed or paid for during the recall or reporting period, the situation is different. Estimates for individual households will vary according to the approach adopted. For groups of households, however, the estimates will 'average out' to a large extent, so that the estimates for groups of households can be said to be indicative of payments and consumption as well as acquisitions.

The following example relating to washing machines illustrates the different approaches discussed above. The HES collects expenditure on the acquisitions of washing machines over the three months period prior to the HES interview. For example, in a group of 1,000 households, on average, 96% of them had washing machines and on average, these washing machines were replaced after 10 years with a new one that was purchased for \$700 and paid for with five equal instalments of \$140.

Using the acquisitions approach, the number of households expected to report expenditure on washing machines, over a three month period is equal to 96% of 1,000 (i.e. 960) households divided by the number of three month periods in 10 years (i.e. 40) which equals 24 households. Each of these households would have spent \$700 and so aggregate expenditure would be equal to 24 multiplied by \$700 which equals \$16,800 every three months. This is divided by the number of weeks in three months (13) and by the number of households in the sample (1,000), to give an average household expenditure of \$1.29 per week.

Using the payments approach, the number of households expected to report expenditure over a three month period is equal to five times 96% of 1,000 households (because payments are made five times by each household) divided by the number of three month periods in 10 years which equals 120 households. The payment of each of these households is equal to the total cost of the machine (\$700) divided by the number of payments (five) which equals \$140. Aggregate expenditure is equal to 120 households multiplied by \$140 which equals \$16,800 every three months. This is divided by the number of weeks in three months (13) and by the number of households in the sample (1,000), to again give average household expenditure of \$1.29 per week.

Using the consumption approach, 96% of 1,000 households would report their ownership in the three month period. The value of consumption is assumed to be equal to the cost of using the washing machine over three months (which is equal to \$700 divided by the number of three month periods in 10 years, which equals \$17.50). Aggregate expenditure is equal to 960 households multiplied by \$17.50 which equals \$16,800 every three months. This is divided by the number of weeks in three months (13) and by the number of households in the sample (1,000) to again give average household expenditure of \$1.29 per week.

Recall periods and timing of expenditure

The total period covered by expenditure estimates is a function of the recall or reporting period at the time of interview and the timing of interviewing. For the HES, interviewing is usually conducted through the 12 months of the reference year, that is, the financial year to which the survey nominally relates (for example, 2015-16). For most

types of expenditure, data are taken from diaries in which survey respondents record their expenditure over a two week period, beginning the day of initial contact. Diary-derived estimates therefore refer to expenditure during the reference year.

Estimates for infrequently purchased or more expensive items are derived from the household questionnaire, (see Appendix 1 of this publication) which collects expenditure information for goods and services on a recall basis. These less frequently occurring items are collected over periods longer than the two week diary reporting period so that sufficient numbers of households report expenditure to enable the calculation of reliable expenditure estimates. For example, in 2015-16, HES survey respondents were asked to recall how much they spent on furniture and appliances over the last three months, on motor vehicle registration over the last 12 months, and on house purchases over the last three years. For other items, such as insurance, rent and utilities bills, survey respondents were asked for the value of their last payment and the period of time to which it related.

The Household Expenditure Classification (HEC) (see Appendix 6 of this publication) lists the items collected in the household questionnaire and their associated recall periods. In general, longer periods are used for items that are expensive, are acquired infrequently or are acquired at irregular intervals. Shorter periods are used for items which are purchased more frequently or are less significant and therefore not well remembered.

The use of different recall periods means that estimates for different expenditure items, in some cases, refer to different periods. The estimates of average expenditure on motor vehicle registration, for example, cover the 12 months prior to the beginning of interviewing to the end of interviewing (July 2015 to June 2016 for the 2015-16 HES). For house purchases, the period is three years prior to the beginning of interviewing to the end of interviewing (July 2012 to June 2016 for the 2015-16 HES). Household questionnaire derived estimates therefore refer to varying periods prior to the reference year as well as during the reference year.

Studies that use HES data tend to assume that all expenditure estimates refer only to the reference year itself. This is generally true for diary derived estimates but is a valid assumption for estimates derived from the household questionnaire only if expenditure prior to the reference year was the same as during the reference year.

For household questionnaire estimates, if the volumes or prices of purchases were lower during the period prior to the reference year, then average expenditure over the preceding period plus the reference year will be less than average expenditure over the reference year only. Similarly, if prices or volumes were higher during the preceding period, the HES estimate will over estimate average expenditure in the reference year. The longer the preceding period (which is equal to the length of the recall period), the greater the likelihood of discrepancy. In cases where expenditure is expected to have changed, researchers may wish to acknowledge or adjust for these differences.

Weekly household expenditure

Estimates of weekly expenditure do not refer to any given week but are weekly equivalents. They are derived by dividing reported expenditure for all members of the household by the number of weeks in the relevant recall or reporting period, as discussed above. For household questionnaire items, recall periods vary from the last three years to the last three months, and for some items the last payment is reported. For diary items, the reporting period is two weeks.

Expenditure for private purposes

The HES provides estimates of expenditure on goods and services used for private purposes. It therefore excludes expenditure for business and other investment purposes. Operating expenses of unincorporated businesses are either not collected or are deducted from reported expenditure. If survey respondents report business expenditure, it is picked up in questions in the household questionnaire or space provided in the diary, in which there is an opportunity to report amounts which 'have been or will be charged to a business'. If amounts have been or are going to be charged to a business, then these are deducted from expenditure during processing.

Deductions of refunds and trade-ins

The HES measures net or 'out of pocket' private expenditure on durable goods, non-durable goods and services for private purposes. Estimates therefore do not refer to the full costs of goods and services used but only the costs payable by the household for goods and services used.

In the case of a refund which is received or expected, the amount of the refund is deducted from expenditure to produce a net figure. For expenditure on visits to general practitioners, for example, Medicare and private health insurance refunds are deducted.

In the case of trade-ins, these amounts are also deducted from expenditure to produce a net figure. For example, if the cost of a motor vehicle is partially financed by the trade-in of another, the amount of the trade-in is deducted from the cost of the acquired vehicle.

In the case of the sale of land, houses and motor vehicles, the sale price net of outstanding loans is deducted from expenditure and in the case of houses and motor vehicles, amounts of successful insurance claims are deducted from expenditure. Deductions are made even if there is no expenditure on that item by the household. Sales and

claims made in the recall period for items that are not replaced during that period are included. This compensates for sales and claims made outside the recall period for items replaced during the recall period.

Where trade-ins, sales and insurance claims exceed the costs of acquisitions of the same expenditure item, expenditure is recorded as negative. For example, if someone sells a luxury motor vehicle and buys a less costly model, the amount of expenditure recorded in the HES would be negative.

Expenditure in-kind

Expenditure in-kind refers to items provided free or at reduced costs by employers to employees for their own private use, or withdrawn from their own business for household consumption. It may also refer to items consumed by the household that have been produced by the household itself (e.g. vegetables), or provided by another household. Non-cash benefits captured in the questionnaire such as rent, telephone, computers and vehicles are included in estimates of expenditure. The non-cash benefit expenditure averages \$36 per week per household in 2015-16.

Salary sacrifice

Salary sacrifice is an arrangement under which an employee agrees to forego part of the remuneration, which they would otherwise receive as wages and salaries, in return for the employer or someone associated with the employer, providing benefits of a similar value. It is a particular type of salary packaging where the amount sacrificed can vary at the employee's discretion within guidelines set by the employer. The usual purpose of salary sacrifice is to reduce the amount of income tax paid by the employee.

More detailed information is collected to improve the estimates for this type of expenditure. The additional information captured within the questionnaire was used to model the value of expenditure on motor vehicles and associated running costs such as fuel, insurance, registration, servicing and tyres.

Classification of expenditure

Expenditure is classified according to the HEC – for more detail, see Appendix 6 'Household Expenditure Classification'.

Most of the approximately 700 items included in the classification relate to expenditure on goods and services, which is the primary focus of the HES. The classification also includes 'selected other payments' which comprise income tax, repayments on mortgage principal for the household's place of residence, other housing costs of a capital nature such as internal renovations, superannuation and life insurance.

The commodity codes for the Household Expenditure Classification (HEC) are largely the same as in 2009-10 with a small number of changes, particularly to address emerging technologies and industries between the survey cycles. Estimates for previous cycles have been recompiled to reflect these changes at a broad expenditure level. The list of commodity codes for 2015-16 HES and a concordance with the 2009-10 HEC is included in Appendix 6 of this publication. The expenditure estimates have also been derived for the Classification of Individual Consumption by Purpose (COICOP). The total expenditure estimates differ between the two classifications due to scope differences, in particular the COICOP includes estimates of imputed rent which are out of scope for the HEC. For more detail, see Appendix 8 'HEC and COICOP concordance'.

COMPARISON WITH AUSTRALIAN SYSTEM OF NATIONAL ACCOUNT

The concept of expenditure used in the HES has many similarities to the household sector expenditure concepts used in the Australian System of National Accounts (ASNA), but also differs in some respects.

A comparison between the 2015–16 HES expenditure estimates and the ASNA is expected to be released as additional information in this publication later in 2017.

RELATIONSHIP BETWEEN RECORDED EXPENDITURE AND INCOME

The HES provides information about both the income and the expenditure of households, but it would be misleading to regard the difference between average weekly income and the sum of the items of average weekly expenditure as shown in the tables in this publication as a measure of savings.

First, to be properly understood, the concept of household saving needs to be articulated along with the concept of household wealth (assets and liabilities), and all forms of income and expenditure need to be measured and classified consistently with these concepts. The HES does not attempt to do this. It focuses on usual income being received at the time the data was collected; estimates of personal income tax; expenditure on current consumption of goods and services; and two major items of expenditure which can be regarded as investment ('mortgage repayments - principal (selected dwelling)' and 'superannuation and life insurance'). The two items of investment expenditure are included in the HES because they are a significant regular commitment of many households which have to be financed from income.

Second, there are significant timing differences between the different components of income and expenditure collected:

- expenditure does not cover all current payments because expenditure was collected on an acquisitions basis;
- expenditure does not cover a common reference period since expenditure estimates for different items refer to different periods; and
- income does not cover a common reference period since income estimates for different sources of income refer to different periods; for example, income from wages and salaries relates to usual pay in a pay period, while income from investment and own unincorporated business relates to income in a whole financial year.

HES income and expenditure estimates therefore do not balance for individual households or groups of households and the difference between income and expenditure cannot be considered to be a measure of saving.

Child care use and cost

CHILD CARE USE AND COST

Many parents and caregivers across Australia utilise formal and informal child care to support labour force participation and education and training; to meet children's development needs; or to supplement care from the primary caregiver for other reasons. Recognising the increased importance of child care to support these outcomes, the Australian government subsidises child care for most households. Child care subsidies are a social transfer in kind that many parents and caregivers rely upon in order to afford the consumption of child care services.

Data on child care including usage, costs, and barriers to labour force participation due to child care related reasons were included in the SIH for the first time in 2007–08. These topics were added to the SIH to meet user requirements and provide data items examining the interactions between child care use, income and labour force participation. These data items are not intended to provide a detailed exploration of child care: this can be found in *Childhood Education and Care, Australia, June 2014* (cat. no. 4402.0) and *National Early Childhood Education and Care Collection: Concepts, Sources and Methods, 2013* (cat. no. 4240.0.55.001).

DATA COLLECTION

Child care information was collected from households containing resident children aged 0–12 years. The information was obtained from an adult who permanently resided in the household and was deemed to be the 'best person' able to provide this information. In the majority of cases this was the child's parent, step-parent or guardian.

Questions about type(s) of child care used (formal or informal), pattern of care with other parent living elsewhere, school attendance, preschool attendance and the cost of care were asked in relation to each child aged 0–12 years in the household. If formal or informal care was used by a child in the last four weeks, further questions about the cost of care, child care benefit, child care rebate and hours used were asked for each episode of care (that is, each type of care for each child).

FORMAL AND INFORMAL CHILD CARE

Formal care is defined as regulated care away from the child's home. The main types of formal care are before and after school care, long day care, family day care, occasional care and vacation care.

Informal care is defined as non-regulated care, arranged by a child's parent or caregiver, either in the child's home or elsewhere. It comprises care by (step) brothers or sisters, care by grandparents, care by other relatives (including a parent living elsewhere) and care by other (unrelated) people such as friends, neighbours, nannies or babysitters. It may be paid or unpaid.

More than one type of care could be selected, therefore some items are multiple response in nature. An explanation of how to use these multiple responses will accompany the release of the CURF to assist microdata users.

UNMET CHILD CARE NEEDS

Data on barriers to labour force participation due to child care related reasons was collected from parents and caregivers of children aged 0–12 years in the selected household who were unemployed, did not have a job or worked part time. The data collected includes: whether people would like a job if child care was available; whether

they would like to work more hours if child care was available; whether child care prevents them from working/working more hours; and what are all the reasons and the main reason that unmet child care needs prevent them from working more hours or working at all. This detail is available at the person level.

CHILD CARE HOURS AND REFERENCE PERIODS

Data was collected on child care used in the four weeks prior to the personal interview, and as such most data items relate to 'last four weeks'. In addition, data is available for care types used 'in the last week' where the number of hours of care used last week was one or more.

CHILD CARE COSTS AND SUBSIDIES

Data on child care costs and subsidies output from the SIH are a combination of modelled and reported data. While child care hours and costs are output as reported, subsidies are modelled for all eligible families, and where the modelled data was higher than the reported data, the modelled data has been output. In 2013–14, the output items were revised to provide information on child care costs in a manner either fully exclusive (gross), or fully inclusive (net) of child care subsidies.

Cost of care

The gross cost of child care (not including the receipt of subsidies) was collected in the 2015–16 SIH and HES. Estimates of CCB and CCR are collected from the child care questions, however there has been a significant gap between the reported number of households receiving assistance and the total value of that assistance, compared to administrative records. In 2015-16 CCB and CCR have been modelled to improve the estimates of these payments.

Total cost is output at three levels: Child care, Income Unit and Household, with a slight variation in the concept between the levels.

- Child care level - the total cost of care is directly the cost as reported for that care, irrespective of child care subsidies. No adjustments are made.
- Income unit level - the total cost of care is the sum of child care subsidies and out of pocket costs (includes informal care).
- Household - the total cost of care is the sum of child care subsidies and out of pocket costs (includes informal care).

The income unit is the preferred unit of analysis for child care. Resources at the income unit level are usually shared between partners in a couple relationship and with dependent children. However, there are limitations on the data provided at this level. At the income unit level, child care data are aggregated from lower levels and as such may apply to more than one child in an income unit. For example, 'Total number of hours of formal and informal child care income unit usually uses each week' is equal to the sum of all hours used by all children in the household.

Child Care Benefit (CCB)

CCB is assistance in the form of a payment made by the Australian Government to help with the costs of child care for families who use either approved or registered child care. The scheme is means-tested and allocates an hourly amount that can either be remitted to child care consumers after child care has been paid, or child care organisations can receive the CCB from the Government, thereby reducing the child care fees payable by the amount of the benefit. Where the CCB is paid directly to providers, respondents may be unsure of the amount at interview. This amount may also fluctuate over the course of the year as family income estimates and care usage patterns may change.

The CCB data that is output from the SIH is calculated by modelling the CCB entitlement for each family on the basis of means information (e.g. income), child care hours and types, and aggregate information about administered benefits. The modelled information is compared with reported CCB, and the higher amount is selected for output.

Child Care Rebate (CCR)

The Child Care Rebate (CCR) is a payment to help families using approved child care for work, training or study related reasons. CCR reimburses 50% of out-of-pocket child care costs (after CCB is taken into account), up to a maximum of \$7,500 per child per year for approved child care. In July 2011 Child Care Rebate was made receivable as a direct payment to child care providers.

CCR entitlement is also modelled for all child care consumers, similarly to CCB. It should be noted that the majority

of child care consumers do not reach the maximum amount of CCR, and therefore receive CCR for the whole financial year. However, a small number of child care consumers do reach this cap, and if interviewed after that point in time, may accurately report nil CCR. For the purposes of SIH, this situation is addressed by annualising the modelled CCR entitlement for the parent or caregiver, and replacing the reported amount with a modelled weekly amount.

COHERENCE WITH PREVIOUS CYCLES AND ACCURACY

There have been many improvements to the child care modelling and output data for 2013–14, which include increased accuracy of subsidies output for income units and more clearly defined output items. The same method of modelling used in 2013–14 was used for 2015–16. For these reasons, the data on subsidies and out of pocket child care costs from 2013–14 onwards are not directly comparable to the data from 2011–12 and prior cycles. Changes between 2011–12 and 2013–14 are attributable both to real world changes and improvements to data quality. In addition, there remains a significant gap between the reported number of households receiving assistance and the total value of that assistance, compared to administrative records. This undercoverage should be taken into account when utilising child care items from the SIH.

Superannuation

SUPERANNUATION

The Survey of Income and Housing (SIH) collects a range of data about superannuation. This allows analysis of both the accumulation and the disbursements of superannuation by households and persons.

All superannuation information is collected at the person level. It can therefore be analysed by person or by household characteristics. For analysis of income and wealth accumulation it is usually most relevant to analyse the circumstances of the household.

Some information is also collected about the individual superannuation accounts people hold.

The Household Expenditure Survey (HES) collects employee expenditure on contributions to superannuation funds or retirement benefit schemes (outside of a salary sacrifice agreement).

PERSONAL INCOME

Salary sacrifice superannuation arrangements of employees

This is a component of employee income and has been available since 2003–04. The relevant person level data item is:

- Current weekly employee income salary sacrificed for superannuation

Superannuation contributions paid to employees by their employer at a level that exceeds the minimum compulsory contributions

This is a component of employee income and has been available since 2003–04. The relevant person level data item is:

- Current weekly benefit from employer provided superannuation (above minimum - non salary sacrifice)

From 1 July 2002 to 30 June 2013, the superannuation guarantee rate was 9%, which then rose to 9.25% for the 2013–14 financial year, and then to 9.5% as of 1 July 2014. However some individual workplace agreements or enterprise bargaining agreements provide for employer superannuation contributions that exceed these rates. Respondents may therefore interpret this question in different ways.

Regular income from superannuation, annuities or private pensions

This is a component of 'Other income' and is available for both current income and previous financial year income. It has been collected in all previous cycles of the SIH and its precursors. The relevant person level data items are:

- Current weekly income from superannuation/annuity/private pension
- Previous financial year income from superannuation/annuity/private pension

This is the only retirement income from superannuation, annuities and private pensions that contributes to estimates of current and previous financial year household and personal income. Irregular lump sum withdrawals are not included in this measure of income.

SUPERANNUATION FUNDS

Balance in superannuation funds

This is a component of financial assets and has been available since 2003–04 in every SIH except for 2007–08, when wealth data was not collected. The total value of superannuation funds is available split by whether they are government or non-government funds.

The relevant person level data items are:

- Balance of accounts with government superannuation funds
- Balance of accounts with non-government superannuation funds

Respondents were encouraged to refer to their last superannuation statement for fund balances.

Superannuation accounts

Information is available about the individual superannuation accounts people held for 2013-14 and 2015-16. The complete list of data items for 2015–16 SIH and HES are available from the 'Downloads' tab of this publication as an Excel spreadsheet, and super account items can be found under the 'Superannuation accounts' section on the 'Person' level. The different types of information are:

- income by type of pension or annuity;
- total number of superannuation or retirement benefit scheme accounts;
- number of retirement schemes currently paying regular income by type of pension and their balance;
- number of retirement schemes currently paying no regular income and their balance; and
- oldest age will be receiving income from a term annuity.

The 'Superannuation' analysis level is available for the 2013–14 and 2015-16 SIH and the 2015-16 HES output to provide similar data about individual superannuation accounts. This data can only be analysed as a paid customised data request.

Type of pension or annuity

For each superannuation account where current regular income is received, the type of account is collected. The different types of accounts are:

- Allocated pension - are accounts where a regular pension is paid by a superannuation fund. On death, the balance of these funds can be paid as a lump sum to a designated beneficiary, used to buy a further pension for a surviving spouse or continued as a reversionary pension. This category includes self-managed superannuation funds.
- Lifetime guaranteed pension - are pensions which are payable for the life of the member, or for the reversionary beneficiary's life on the death of the member. Payments are made at least annually; they are a fixed amount and generally only varied by indexation. These are also sometimes called lifetime annuities.
- Term annuity - are fixed-term products that give people a guaranteed income for a specified term. Involves a series of payments purchased with a lump sum, usually from an insurance company.
- Other account type - includes any other type of pension or annuity e.g. transition to retirement pensions.

'Other account type' descriptions provided by respondents were recoded where possible to the appropriate pension or annuity type. This method was improved for 2015-16 SIH and HES, reducing the overall instances of 'Other account type'. Therefore type of pension or annuity is not directly comparable to 2013-14 SIH estimates.

Lump sum superannuation payments

Value of lump sum superannuation payments

The value of lump sum superannuation payments received in the last two years that were in total worth \$500 or

more, has been collected since 2003–04. It enables analysis of how people are using their superannuation funds other than as a source of regular income. These payments do not contribute to current weekly estimates of personal or household income.

The relevant person level data item is:

- Personal irregular receipts from superannuation payments over last 2 years

Use of lump sum superannuation payments

The uses, and main use, of lump sum superannuation payments (received over the last two years) including re-investment into other assets, debt reduction and consumption expenditure is available in 2013–14 and 2015–16. The complete list of data items for 2015–16 SIH and HES are available from the 'Downloads' tab of this publication as an Excel spreadsheet, and super lump sum items can be found under the 'Superannuation lump sum receipts' section on the 'Person' level.

Imputed rent

IMPUTED RENT

The ABS has implemented new methodologies for household level estimates of gross imputed rent in the 2015–16 Survey of Income and Housing (SIH) and Household Expenditure Survey (HES). Different methodologies have been developed for owner-occupied dwellings and other subsidised tenure types.

The housing costs for deriving net imputed rent for each tenure type are unchanged, however the net imputed rent estimates are impacted by the change in gross imputed rent estimates.

Net imputed rent is estimated as gross imputed rent less housing costs. For owner-occupiers, the housing costs subtracted are those which would normally be paid by landlords i.e. general rates, water and sewerage rates, mortgage interest, building insurance, and repairs and maintenance. For households paying subsidised rent (e.g. tenants of an employer or of a state/territory housing authority) and households occupying their dwelling rent-free, the housing costs that are subtracted are largely made up of the reported rent paid, but also include other housing costs incurred, such as rates, which are also subtracted for some tenure types.

The availability of imputed rent estimates allows the analysis of household income to be extended to include the imputed rental incomes that flow to people living in homes owned by the occupant and those paying subsidised rent. Such imputations allow for more meaningful comparison of the income circumstances of people living in different tenure types, and to understand changes over time in income levels and the distribution of income when tenures may also be changing over time. Including imputed rent as part of household income and expenditure conceptually treats owner-occupiers as if they were renting their home from themselves, thus simultaneously incurring rental expenditure and earning rental income. Imputed rent is included in income on a net basis i.e. the imputed value of the services received less the value of the housing costs incurred by the household in their role as a landlord.

The new methodologies for household level imputed rent estimates are explained in *Estimates of Imputed Rent, Australia, 2015–16* (cat. no. 6525.0) which is expected to be released in late 2017. The information paper also quantifies the impact of the new methodologies compared to the previous methodologies, including the experimental method implemented in 2013–14.

The methodology for owner-occupied dwellings uses aggregated dwelling sales data from the eight state and territory Valuers General departments and Census rental data to produce mean rental yields for very small geographic regions. Median rental yields are then allocated to 220 strata or groups across Australia (based on location, dwelling type, and socio-economic status). These rental yields are used to produce gross imputed rent estimates for individual dwellings in the SIH and HES. Net imputed rent estimates are then derived for individual dwellings by deducting their housing costs from the gross imputed rent estimates. Historical gross and net imputed rent data from 2003–04 to 2013–14 have been revised using the new methodologies. These will be published in *Household Income and Wealth, Australia, 2015–16* (cat. no. 6523.0)

In 2015–16, the experimental methodology implemented in 2013–14 was further refined. Stratification by number of bedrooms was removed from the method and semi-detached dwellings were combined with apartments. Overall, the effect of these changes reduced the number of strata from 725 to 220. For further information on the method implemented in the 2015–16 SIH and HES and the refinements made to the imputed rent methodology, please refer to *Estimates of Imputed Rent, Australia, 2015–16* (cat. no. 6525.0)

For more information on the previous methodologies, see the previous issue of the publication *Experimental Estimates of Imputed Rent, Australia, 2003–04 and 2005–06* (cat. no. 6525.0) which contains background on the hedonic regression method, and *Experimental Estimates of Imputed Rent, Australia, 2013–14* (cat. no. 6525.0) which contains background on the experimental method.

Analysts who use SIH confidentialised unit record files (CURFs) will be able to produce revised gross imputed rent estimates using the latest methodology for individual owner-occupied dwellings for each SIH from 2003–04 to 2013–14. Rental yields for strata based on CURF variables will be provided as a data cube in *Estimates of Imputed Rent, Australia, 2015-16* (cat. no. 6525.0). The revised gross imputed rent for an owner-occupied dwelling can be calculated as the 'Estimated sale price of the dwelling' reported in the relevant SIH or HES, multiplied by the published rental yield for the stratum of the dwelling (based on location and dwelling type). More information is available in the 'Historical Data' section of the same publication.

Additional data items are available for income measures which include imputed rent that exclude housing related social transfers in kind (STIK). These data items are useful for undertaking analysis where both imputed rent and STIK are included in the measure of income. These data items exclude the housing component of STIK in imputed rent for state/territory housing authority tenants to prevent double counting of housing STIK estimates.

Fiscal Incidence Study

FISCAL INCIDENCE STUDY

INTRODUCTION

The Fiscal Incidence Study (FIS) shows the effects of government benefits and taxes on the distribution of income among private households in Australia. Data for FIS will be available in *Government Benefits, Taxes and Household Income, Australia, 2015-16* (cat. no. 6537.0) expected to be released in early 2018.

Household income is increased directly by the Australian government through social assistance benefits in the form of cash payments, such as the age pension and family tax benefit, and indirectly by government expenditures such as those on health and education. On the other hand, household income is reduced by taxes on personal income (direct taxes) and by taxes on production (indirect taxes) passed on in the prices households pay for goods and services.

The FIS excludes government taxes and expenditure that do not relate directly to particular types of households or household expenditure, such as government revenue from corporate taxes and spending on defence, public order and safety, transport and communications.

INCOME CONCEPTS

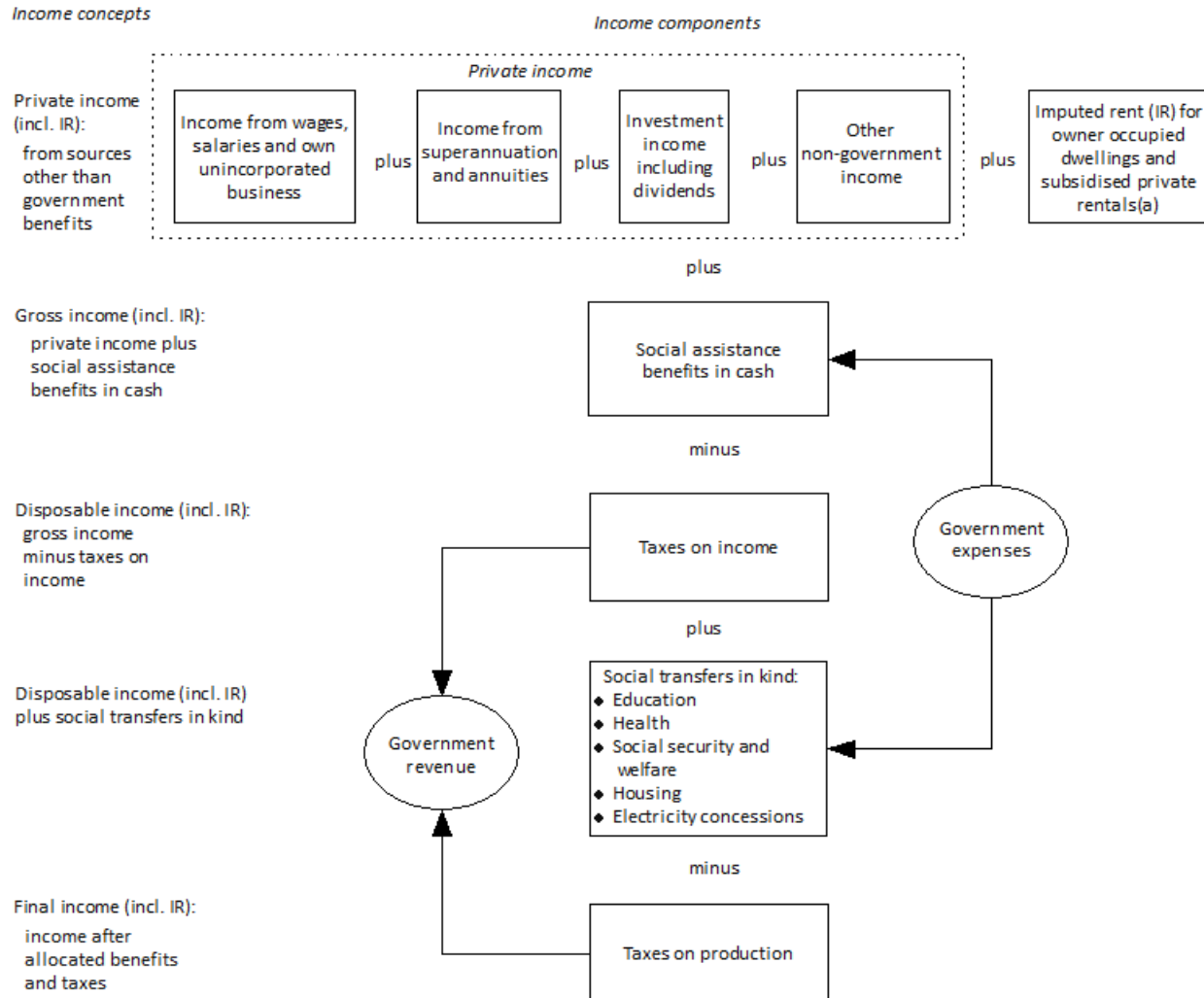
The most restricted concept of income used in the FIS is referred to as private income, while the most extensive is final income. Private income is all current receipts, whether monetary or in kind, received excluding social assistance benefits in cash. Private income includes wages and salaries, profit/loss from own unincorporated business, net investment income and private transfers. It also includes net imputed rent for owner occupied dwellings and for subsidised private rentals to allow for more meaningful comparisons of the income circumstances of people living in different tenure types.

Gross income is the sum of private income and Australian government social assistance benefits in cash (direct Australian government benefits) such as age pension, disability support pension, Veterans' Affairs pension, family tax benefit, parenting payment, unemployment and student allowances. Disposable income is derived by subtracting estimates of taxes on personal income from gross income.

The value of government social transfers in kind for education, health, housing, social security and welfare, and electricity concessions and rebates (indirect benefits) is added to disposable income to derive disposable income plus social transfers in kind. Final income is equal to disposable income plus social transfers in kind less taxes on production.

The following diagram illustrates the different income concepts:

Income concepts



METHODOLOGY

The three major data sources used in the FIS were the 2015–16 ABS Household Expenditure Survey (HES), ABS Government Finance Statistics (GFS), and Input-Output tables from the Australian System of National Accounts (ASNA).

Social transfers in kind

Social transfers in kind consist of goods and services provided free or at subsidised prices by the government. In the FIS, these are restricted to those arising from the provision of education, health, housing, social security and welfare services, and electricity concessions and rebates. STIK includes reimbursements of approved expenditures such as the Medicare rebate, the Private Health Insurance Rebate, the Child Care Benefit and the Child Care Rebate. The cost of administering the provision of social assistance benefits in cash is included. For more information see the 'Social transfers in kind' section of this publication.

Taxes on production

Taxes on production consist of taxes on products and other taxes on production. Total taxes on production are calculated net of any subsidies received from governments.

In allocating the taxes on production, it is assumed that industries will pass the burden of the taxes on production they pay to the purchasing industries and/or final consumers through higher prices. Also, the burden of the tax will be passed from one industry to another until the total burden of the tax is passed on to a final demand sector, one of which is the household sector.

Taxes on products are taxes payable on goods and services when they are produced, delivered, sold, transferred or otherwise disposed of by their producers. They include goods and services tax (GST), taxes and duties on imports, and other taxes on products such as fuel and tobacco excises.

Other taxes on production consist of all taxes except taxes on products that enterprises incur as a result of engaging in production. These taxes do not include any taxes on profits or other income received by the enterprise. They are taxes payable on the land, fixed assets or labour employed in the production process or on certain activities or transactions. Other taxes on production include taxes on payroll or workforce, land taxes, business and professional licences and stamp duties.

The amount of taxes on production paid by HES households are calculated as follows:

- the incidence of taxes on production to households is estimated using Input-Output tables from within the ASNA. The Input-Output tables present a comprehensive picture of the supply and use of goods and services in the economy and the income generated from production. It records the flows of products from one industry to another and to final demand for consumption. For this study, the Input-Output tables are used to calculate a tax rate for each of the 115 Input-Output product groups (IOPG)
- the Household Expenditure Classification (HEC) is used to classify household expenditure in the HES. The approximately 700 HEC codes are mapped to the 115 IOPG codes
- household expenditure classified to each HEC code is multiplied by the relevant tax rates to estimate the total final incidence of taxes on production for each household.

A more detailed description of the methodology used to allocate taxes on production is available in *Government Benefits, Taxes and Household Income, Australia, 2015-16* (cat. no. 6537.0), due for release in early 2018.

COMPARISON WITH AUSTRALIAN SYSTEM OF NATIONAL ACCOUNTS

A comparison between the FIS estimates of social assistance benefits in cash and social transfers in kind and the aggregate estimates of household income published in *Australian System of National Accounts* (cat. no. 5204.0) is included in the Explanatory Notes in *Government Benefits, Taxes and Household Income, Australia, 2009-10* (cat. no. 6537.0). It also compares taxes on income and taxes on production allocated in the study with the relevant taxation revenue estimates published in *Taxation Revenue, Australia, 2010-11* (cat. no. 5506.0).

Social transfers in kind

SOCIAL TRANSFERS IN KIND

INTRODUCTION

The Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) collect the value of Australian government cash pensions and allowances, such as the Age Pension and Family Tax Benefit, directly from survey respondents. However, the government also provides goods and services to households for free or at subsidised prices e.g. education, health, housing and child care. In output from the SIH, these are called social transfers in kind (STIK).

The inclusion of both government social assistance benefits in cash and STIK in analyses of household income provides a more comprehensive picture of the income circumstances of different groups in the population.

In the SIH and HES, government expenditure on STIK is only allocated to households when it can be related to particular types of households e.g. school education expenditure can be allocated to households with school age children.

Until 2009-10, STIK were allocated to households as part of a fiscal incidence study conducted using data from the six-yearly HES. In this study, income tax and taxes on production (such as the GST) were also allocated to households to provide a complete picture of the effects of taxation and government expenditure on the distribution of income among households. The results of these studies are published in *Government Benefits, Taxes, and Household Income, Australia* (cat. no. 6537.0) for the years 1984, 1988-89, 1993-94, 1998-99, 2003-04 and 2009-10.

Since the 2011-12 SIH, estimates of STIK received by households have been published as part of standard survey outputs. In 2011-12, analysis of STIK was presented in the 'Appendix 4 Social transfers in kind' section of the publication *Household Income and Income Distribution, Australia, 2011-12* (cat. no. 6523.0) and in a separate data cube available from the 'Downloads' tab of that publication. From 2013-14, the STIK tables have been integrated with other survey outputs in the data cubes accompanying the publication *Household Income and Wealth, Australia, 2015-16* (cat. no. 6523.0).

INCOME CONCEPTS

In the data cubes accompanying the publication *Household Income and Wealth, Australia, 2015–16* (cat. no. 6523.0), tables are included detailing the estimated amount of government benefits received by households. In these tables, net imputed rent has been included as a component of private income. The inclusion of imputed rent is a broader concept of private income than is included in most tables in that publication. The inclusion of net imputed rent for owner-occupied dwellings and for subsidised private rentals allows for more meaningful comparisons of the income circumstances of people living in different tenure types.

Tables presenting analysis of the government benefits received by households (both cash and in-kind), include the following components of income:

- private income (including imputed rent) which includes employee income, profit/loss from own unincorporated business, net investment income, private transfers, overseas pensions, and net imputed rent for owner-occupied dwellings and subsidised private rentals;
- gross income (including imputed rent) which is the sum of private income (including imputed rent) and Australian government social assistance benefits in cash (direct Australian government benefits); and
- disposable income (including imputed rent and STIK) which is derived by adding imputed rent and STIK to gross income and subtracting estimates of taxes on personal income.

For further information on the income concepts and components, see the 'Income' section of this publication and for imputed rent, see the 'Imputed rent' section of this publication.

DATA SOURCES AND METHODOLOGIES

ABS Government Finance Statistics (GFS) were the main source for valuing the cost to government of the provision of STIK. The total value of STIK is defined as Commonwealth, state or territory and local government expenses, net of intra-government transfers, minus personal benefit payments paid in cash minus government revenue from the sale of goods and services.

Resident population estimates used to calculate some STIK estimates were taken from the publication *Australian Demographic Statistics*, Sep 2016 (cat. no. 3101.0).

Information reported in the SIH and HES on the composition and characteristics of household members has been used as the basis for allocating STIK to individual households. Estimates for STIK in this study have been modelled using approaches consistent with the 2009–10 fiscal incidence study. A detailed explanation of the methodologies used in 2009–10 is provided in 'Appendix 4: Methodology for allocating social transfers in kind' of the publication *Government Benefits, Taxes, and Household Income, Australia, 2009–10* (cat. no. 6537.0).

In the 2011–12 study, the methodologies for some health and education benefits were slightly different as not all of the detailed data used in the previous study was collected in that SIH cycle. These differences are explained in 'Appendix 4 Social transfers in kind' of the publication *Household Income and Income Distribution, Australia, 2011–12* (cat. no. 6523.0).

Education

STIK were allocated for school education, tertiary education, and other education benefits. School education includes benefits from pre-school, primary and secondary education, and student transportation. Tertiary education includes benefits from university education, technical and further education, and tertiary education nec. Other education includes benefits from special education and education not elsewhere classified.

The value of education benefits received by members of individual households was allocated based on reported characteristics and summed to the household level. This included the type of institution attended (such as, secondary school or university) as well as whether the institution was a public or private institution (such as, schools run by the Catholic Church or other private organisations).

Of the \$66.4 billion available for allocation in 2015–16, \$64.1 billion (97%) was allocated.

School education

Data on the number of children attending pre-school in each state or territory were obtained from the publication *Childhood Education and Care, Australia, June 2014* (4402.0). Pre-school figures were adjusted to represent the SIH or HES reference period using the change in the number of 3 to 5 year olds over this period according to *Australian Demographic Statistics*, Dec 2016 (3101.0). The benefit received by households was the estimated number of children attending pre-school in each household multiplied by the average pre-school benefit for their state or territory of residence.

Primary and secondary school data on average expenditure per student was obtained from the Report on Government Services (ROGS) for government school children, and from the Department of Education and Training, for non-government school students. An average benefit, for both education and transportation, was calculated for six student types: government primary, Catholic primary, other non-government primary, government secondary, Catholic secondary and other non-government secondary. Numbers of full-time equivalent students in August 2015 and August 2016 were obtained from the publication *Schools, Australia, 2016* (cat. no. 4221.0).

Of the \$46.9 billion available for allocation in 2015–16, \$45.2 billion (96%) was allocated.

Tertiary education

Government expenses relating to university education and Technical and Further Education (TAFE) were allocated to tertiary education students. Average benefits were derived by dividing GFS expenses by total enrolments from Education and Work, Australia, 2015 and 2016 (cat. no. 6227.0). Part-time students were assumed to receive half the benefits of full-time students. Benefits were allocated to households according to the number of members who reported themselves as attending university education or TAFE.

Of the \$15.1 billion available for allocation in 2015–16, \$14.6 billion (97%) was allocated.

Other education benefits

Government expenses relating to special and other education were allocated equally to each pre-school and school student, and household benefits were the sum of household members' benefits.

Of the \$4.4 billion available for allocation in 2015–16, \$4.3 billion (98%) was allocated.

Health

Health benefits were allocated for acute care institutions, community health services, pharmaceuticals, the Private Health Insurance Rebate (PHIR), and other health benefits. Other health benefits cover public health services, health research, and health administration not elsewhere classified.

Except for the PHIR, these benefits were allocated to households according to an insurance premium approach, that is, household members were allocated benefits according to the average utilisation rates for their age, sex, and state or territory of residence. Additionally for people with a disability or long term health condition, a higher utilisation rate was estimated, depending on their level of disability, using data on usage of health services collected in the publication *Australian Health Survey: First Results, 2011–12* and *Australian Health Survey: First Results, 2014–15* (cat. no. 4364.0.55.001).

Of the \$114.2 billion available for allocation in 2015–16, \$107.7 billion (94%) was allocated.

Acute care institutions

Government expenses relating to acute care institutions were allocated to all household members according to hospital bed utilisation for their age, sex, and state or territory of residence. Hospital utilisation was used as an indicator of the use of all institutional services and benefits, and utilisation rates were calculated using unpublished data on patient days obtained from *Australian Hospital Statistics, 2015–16* (AIHW).

The benefit allocated to households was the sum of each member's utilisation rate multiplied by the average benefit per hospital bed day in their state or territory of residence. The average benefit per hospital bed day was derived by dividing GFS expenses by the number of days spent in hospital. A higher utilisation rate was applied to people with a disability.

Of the \$45.6 billion available for allocation in 2015–16, \$45.5 billion (100%) was allocated.

Community health services

Government expenses relating to community health services were allocated to all household members according to the doctor visit rate for their age, sex and state or territory of residence. Doctor visits were used as an indicator of utilisation for all non-institutional benefits and services (e.g. dentists, optometrists and specialists). Utilisation rates for doctors were calculated using data obtained from the Department of Human Services (Medicare). A higher utilisation rate was applied to people with a disability.

The benefit allocated to households was the sum of each member's utilisation rate multiplied by the average benefit per doctor visit. A higher utilisation rate was applied to people with a disability.

Of the \$37.4 billion available for allocation in 2015–16, \$31.7 billion (85%) was allocated.

Pharmaceuticals

Government expenses relating to pharmaceuticals, medical aids, and appliances were allocated to all household members according to their eligibility for pharmaceutical concessions and average usage of prescribed medicines for their age, sex, and state or territory of residence.

Household benefits were the sum of each household member's utilisation rate (provided by the Department of Human Services) multiplied by the average benefit per prescribed medicine according to their eligibility for concessions. Average benefits per prescribed medicine for those eligible or not eligible for concessions were derived by dividing GFS expenses by total prescribed medicine utilisation for the two groups. For persons receiving concessions, total prescribed medicine utilisation was the product of benchmark numbers of holders of each type of concession card multiplied by the average utilisation rate for those eligible for concessions. For others, total prescribed medicine utilisation was the product of the estimated resident population (minus those who are holders of concession cards) multiplied by the average utilisation rates. A higher utilisation rate was applied to people with a disability. Benefits were adjusted according to total government expenses in each state and territory.

Of the \$14.1 billion available for allocation in 2015–16, \$13.9 billion (99%) was allocated.

Private Health Insurance Rebate

The Private Health Insurance Rebate (PHIR) was allocated to households that reported expenditure on private health insurance. This expenditure was collected net of the PHIR. The value of the PHIR allocated to each household was calculated based on the income and age of persons in each household to take account of the means testing of the PHIR introduced in 2012.

Of the \$5.9 billion available for allocation in 2015–16, \$5.6 billion (95%) was allocated.

Other health benefits

Government expenses relating to public health, health research, and health administration not elsewhere classified, were allocated to all household members. An average benefit was derived by dividing GFS expenses per state and territory by the estimated resident population, from the publication Australian Demographic Statistics, Sep 2016 (cat. no. 3101.0).

Benefits per household were equal to the number of household members multiplied by the average benefit.

Of the \$11.3 billion available for allocation in 2015–16, \$10.9 billion (96%) was allocated.

Social security and welfare

Social security and welfare benefits were allocated for child care assistance and for all other social security and welfare benefits.

Of the \$35.0 billion available for allocation in 2015–16, \$31.8 billion (91%) was allocated.

Child care assistance

The government provides two different payments to assist households with the cost of approved child care: the Child Care Benefit (CCB), and the Child Care Rebate (CCR).

CCB was modelled at the income unit level depending on the number of children in formal care, the reported hours of care, and the relevant income thresholds and tapers (obtained from the Department of Education). The CCR allocated to relevant households was based on both reported and modelled data at the income unit level calculated using the eligibility criteria for the payment.

Of the \$7.0 billion available for allocation in 2015–16, \$6.7 billion (96%) was allocated.

Other social security and welfare benefits

Government expenses relating to other social security and welfare programs, other than expenditure on direct cash payments, child care, and residential aged care, were allocated to persons who received social security and welfare benefits.

Average STIK for different types of benefit recipients were calculated by dividing the GFS expenses for each category of expenditure by the number of recipients based on data obtained from the Department of Social Services and Department of Veterans' Affairs, then adjusted to ensure people receiving multiple benefits were not double counted.

Of the \$28.0 billion available for allocation in 2015–16, \$25.1 billion (90%) was allocated.

Housing

Housing benefits were allocated to households in government rental accommodation according to the estimated value of rental subsidy that they received. The value of the subsidy was calculated as the difference between the estimated market rent for their dwelling if it were to be privately rented, less the actual rent paid by households. In total, \$2.7 billion was allocated in 2015–16.

STIK for housing do not include Commonwealth Rent Assistance (CRA) because it is included in social assistance benefits in cash. The purchase of new dwellings for future subsidised rental is also not included because it is treated as capital expenditure which will provide benefits to future subsidised renters.

Electricity Concessions

All state and territory governments provide concessions or rebates on electricity bills to certain households. In this study, government expenses for electricity concessions were allocated to households who were eligible to receive the relevant concessions or rebates. As each state and territory has different concession rates and eligibility requirements, these expenses were allocated to eligible households according to the value of the concession in their state or territory of residence. In total, \$686 million was allocated in 2015–16.

Deprivation and financial stress indicators

DEPRIVATION AND FINANCIAL STRESS INDICATORS

INTRODUCTION

While income and wealth statistics can describe the economic resources available to people to provide command over goods and services in aggregate, and expenditure statistics can describe people's associated consumption patterns, there are other issues that are relevant to understanding living standards. For example, a person's poor state of health or limited access to education facilities may lead to greater expenditure addressing their particular situation, and relatively less expenditure on other basic necessities of life, than is achieved by other people who earn similar incomes or who are spending, in aggregate, about the same amount. In attempting to identify which households have the lowest economic wellbeing, it is therefore useful to also consider indicators that more directly identify households with poor economic outcomes. The HES collects data relating to deprivation and financial stress for this purpose and summary results from the 2015-16 financial stress data can be found in Household Expenditure Survey, Australia: Summary of Results, 2015-16 (cat. no. 6530.0).

DEPRIVATION INDICATORS

The specific indicators of deprivation, i.e. the items of expenditure considered to be some of the 'basics of life' that deprived households may not be able to afford are:

- a holiday for at least one week a year;
- a night out once a fortnight;
- to invite friends or family over for a meal once a month;
- a special meal once a week;
- leisure or hobby activities; and
- new clothes most of the time.

These items were the six deprivation indicators, out of 37 collected for the Deprivation Standards Project (Travers and Robertson, 1995), that were most highly correlated with an alternative, factor-based index of deprivation compiled in that project report. This index was derived from a wide range of indicators including the 37 'basics of life', shortage of money (cash flow, access to finance, budget management), dissatisfaction with home and life, access to important places and perceptions of changes in standard of living.

It is important to note that the indicators included in the ABS survey are not the most fundamental 'basics of life' that were included in the full list of 37. When the social security clients surveyed for the Deprivation Standards Project were asked to rate the 37 'basics of life', only one of the six indicators used in the ABS survey – affording leisure or hobby activities – rated above the mean score of importance for that target group.

Four of the six indicators selected by the ABS were ranked 30th or lower in order of importance in the Travers/

Robertson report. However, the most highly ranked indicators in this report included such things as medical treatment and a bath or shower, where most clients had access to such goods and services. The six indicators included in the HES were highly correlated with the factor based index and therefore act collectively as a point of differentiation between the deprived and the more fortunate in society.

Given the nature of the indicators chosen, care needs to be exercised in interpreting individual responses in isolation from other responses provided. All individuals have their own priorities and consumption preferences and may choose quite different patterns of expenditure from a socially accepted norm of the 'basics of life'. For example, a household may observe that it 'cannot afford' items specified in one or more of the chosen indicators (e.g. meals out or hobbies) because it devotes a considerable proportion of its budget to saving for an overseas holiday. If the household can afford an overseas holiday, however, it is difficult to envisage the household as deprived, even if it chooses to forego expenditure that other households might consider basic.

The relevance of the selected indicators as a measure of deprivation to selected population groups can also be tested by observing the take-up rate of the indicators by households with higher incomes. In establishing whether households could afford each of the selected basics of life activities, the survey first asks whether or not households usually had the basic item and, if not, whether it was because they could not afford it or because they did not want it. Those households where age and disability support pensions are the main source of income can be used as an example of where significant changes in income levels did not significantly increase the take up of some of these 'basics of life'.

In the 1998–99 HES, the proportion of these pension recipients stating that they could not afford to have friends or family over for a meal once per month drops from 13% in the lowest income quintile (i.e. the bottom 20% of households in terms of income) to 9% in the third quintile (i.e. the middle 20% of households in terms of income). At the same time, the proportion of these welfare recipient households engaging in this activity only rose from 52% in the lowest quintile to 54% in the third quintile. Largely offsetting the decrease in 'deprivation' as incomes rise was an increase in the number of households stating that they did not want this activity.

A similar pattern was observed in the 1998–99 HES for the criterion of having a special meal once a week, where an increase in take up of the activity, from 35% to 40% in moving from the lowest to the third quintile, was accompanied by a fall in the incidence of deprivation (from 22% to 14%) and an increase in those that identify as not wanting the activity (up from 22% to 30%). For the criterion of having a night out, the large fall in observed deprivation (from 33% to 15%) in moving from the lowest to the third quintile is accounted for by some increase in take up (from 29% to 36%) and a larger increase in those not wanting it (up from 19% to 28%). However, if only 36% of these income recipients in the third quintile engaged in the activity, nearly as many did not want it and only 15% said they can't afford it, there is a question of how 'basic' it is.

It is possible that the answer of 'can't afford it' may be a default answer for lower income groups which do not need to consider preferences across a wide range of activities that cannot be afforded, but such a default response becomes less relevant as incomes rise. Therefore the deprivation indicators chosen may not be an independent test in themselves to benchmark against income, and the nature of the answers given may be very highly correlated to income levels.

It would be possible to apply preference weights to a wider group of expenditure items for each household to identify 'basic' items, based on each household's perceptions of importance, or develop weights for particular income and population groups, or overall population weights as was done in the Deprivation Standards Project. However, the costs of collecting this additional information and the respondent burden in doing so was not considered warranted by the ABS. Instead, the ABS has focussed on compiling unweighted deprivation indicators most highly correlated with the Travers/Robertson factor-based index, together with unweighted financial stress indicators, so that wider perspectives on deprivation and financial stress can be considered.

FINANCIAL STRESS INDICATORS

The financial stress questions asked in the HES relate to cash flow problems and financial resources. The nine specific financial stress indicators are:

- household spends more money than it gets (over the past 12 months);
- unable to raise \$2,000 in a week for something important;
- could not pay electricity, gas or telephone bills on time;
- could not pay car registration or insurance on time;
- pawned or sold something;
- went without meals;
- could not afford to heat their home;
- sought assistance from welfare/community organisations; and
- sought financial help from friends or family.

As with the six 'deprivation' indicators, the nine financial stress indicators must also be used with caution. For

example, the indicator 'could not pay electricity, gas or telephone bills on time' was reported by a relatively large proportion of households in the higher income quintiles, which suggests that the item does not necessarily reflect absolute incapacity to pay so much as a short deferral of payment. For many people it might be chosen as a short-term cash flow management technique if there is no immediate penalty when payment is made a little late. Similarly, the indicator that households have spent more than they received over the past 12 months is clouded by prospects for adjusting expenditure over time by saving/borrowing and on its own is not a good indicator. However, the higher incidence of such indicators for some groups of people would suggest that those groups have greater cash flow and financial resource problems than groups of people with a lower incidence of these indicators.

It should also be noted that the choice households make between some of the indicators are likely to be affected by the composition of the household. For example, households with children are probably less likely to choose to go without meals when short of money than are single person households.

Travers, P. and F. Robertson, November 1995, Deprivation Standards Project, Flinders University of South Australia, Report prepared for the Department of Social Security.

Sampling

SAMPLING

SCOPE AND COVERAGE

Scope

The Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) collects information by personal interview from usual residents of private dwellings in urban and rural areas of Australia (excluding Very Remote areas), covering about 97% of the people living in Australia. Private dwellings are houses, flats, home units, caravans, garages, tents and other structures that were used as places of residence at the time of interview. Long-stay caravan parks are also included. These are distinct from non-private dwellings which include hotels, boarding schools, boarding houses and institutions. Residents of non-private dwellings are excluded. Usual residents excludes:

- households that contain members of non-Australian defence forces stationed in Australia;
- households that contain diplomatic personnel of overseas governments; and
- households in areas defined as Very Remote - this has only a minor impact on aggregate estimates, except in the Northern Territory where such households account for about 22% of the population.

For most states and territories, the exclusion of people in Very Remote areas has only a minor impact on any aggregate estimates that are produced because they constitute just a small proportion of the population. Very Remote and Remote areas are defined by the assignment of an Accessibility/Remoteness Index of Australia (ARIA) score. ARIA is a remoteness value (a continuous variable between 0 and 15) that measures the physical distance which separates people in a particular area and where their goods, services and opportunities for social interaction may be accessed.

The ARIA categories, and how ARIA scores are calculated, are further explained in the Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2011 (cat. no. 1270.0.55.005).

Coverage

Information was collected only from usual residents. Usual residents were residents who regarded the dwelling as their own or main home. Other people present were considered to be visitors and were not asked to participate in the survey.

SAMPLE DESIGN AND SELECTION

Sample design

The SIH and HES sample were designed to produce reliable estimates for broad aggregates of income, wealth, housing and expenditure data for household residents in private dwellings of Australia, the State and Territories and for the capital cities and rest of state. More detailed estimates should be used with caution, especially for Tasmania, the Northern Territory and the Australian Capital Territory due to smaller samples in these localities. For more information see the 'Reliability of Estimates' section of this publication.

The SIH and HES samples were designed together. HES is a subsample of the SIH sample and some dwellings were selected to complete both the SIH and HES questions while others were selected to complete only the SIH questions. In 2015-16 dwellings were selected through a stratified, multistage cluster design from the private dwelling framework of the ABS Population Survey Master Sample. Selections were distributed across a twelve month enumeration period so that the survey results are representative of income and expenditure patterns across the year.

For the 2015-16 SIH and HES there was an additional sample of capital city households, targeting households whose main source of income was government pensions, benefits and/or allowances. These households were enumerated using a separate sample design, and received the combined SIH and HES questionnaires. In this additional sample, dwellings were targeted using information from the previous HES (2009-10), and information from the Socio-Economic Indexes for Areas (SEIFA). Households were screened using a short questionnaire to identify whether pensions and benefits were likely to be the main source of income for the household. 23,870 households were screened. One in four households were selected to complete the combined SIH and HES questionnaire and diaries regardless of the screening outcome. Information from this sample were used to assess the outcomes from the screening questionnaire for the whole sub-sample.

SIH selected dwellings, sample loss and selected households

In the 2015-16 SIH, 29,815 dwellings were initially selected for the main sample. When fieldwork commenced some dwellings selected for inclusion in the main sample were found to be out of scope units. Collectively these are referred to as sample loss, and are composed of the following groups:

- dwellings that are out of scope of the survey, under construction, demolished, or converted to non-private dwellings or non-dwellings;
- vacant private dwellings; and
- private dwellings that contain only visitors or out of scope residents (e.g. dwellings occupied by foreign diplomats and their dependants).

In 2015–16, the SIH sample loss was 4,883 dwellings which accounted for 16% of the selected sample.

Sometimes dwellings that have been selected for inclusion in a survey are found to comprise more than one actual dwelling because an additional residence, such as a 'granny flat', has been added to the original dwelling. In such cases, each actual dwelling becomes a separate household. For privacy reasons, residents of a selected dwelling can request that their details be provided separately from other dwelling residents. A separate household is then created for each group of residents. In 2015-16 SIH, 56 selected dwellings were split into two households and 21 were split into three or more households.

A further 7,164 (24%) did not respond at all to the questionnaire, or did not respond adequately. Most of these were not able to take part in the survey during the collection period or were contacted but either refused to respond or were not able to respond adequately. The remainder of these households included:

- households affected by death or illness of a household member;
- households which did not respond because due to communication barriers or because they refused to participate (7.6% of all contacted households).

126 households were excluded because the main income earners in the household did not adequately respond to questions about income sources and amounts. 229 households that were collected as part of the HES sample but did not have sufficient expenditure diary information were retained as part of the SIH sample.

Final SIH sample

Of the selected dwellings (24,932) that were contacted and in scope of the survey, 17,768 (71%) households were included as part of the final estimates.

SIH FINAL SAMPLE, 2015–16

	GREATER CAPITAL CITY		REST OF STATE		TOTAL	
	Households	Persons (a)	Households	Persons (a)	Households	Persons (a)
	no.	no.	no.	no.	no.	no.
NSW	2 212	4 357	910	1 718	3 122	6 075
Vic.	2 526	5 023	1 119	2 053	3 645	7 076
Qld	1 505	2 924	1 153	2 189	2 658	5 113
SA	1 675	3 167	1 105	1 990	2 780	5 157
WA	1 427	2 825	1 088	2 027	2 515	4 852

Tas.	709	1 279	1 104	1 976	1 813	3 255
NT	418	805	83	146	501	951
ACT	734	1 489	-	-	734	1 489
Aust.	11 206	21 869	6 562	12 099	17 768	33 968

- nil or rounded to zero (including null cells)

(a) Number of persons aged 15 years and over

The SIH sample is not evenly balanced over the course of the year. Due to under-performance of the sample design in the first half of the collection year, a top-up sample was selected and collected from January - July 2016. The fully responding households by each half of the collection year are provided in the table below.

Weights adjust by quarter to ensure representativeness across the year.

Fully responding sample, 2015-16 collection year

	July-December 2015	January-July 2016	Full Collection Period	July- December 2015	January-July 2016	Full Collection Period
	no.	no.	no.	%	%	%
NSW	1 276	1 846	3 122	40.9	59.1	100
Vic.	1 622	2 023	3 645	44.5	55.5	100
Qld	1 105	1 553	2 658	41.6	58.4	100
SA	1 246	1 534	2 780	44.8	55.2	100
WA	966	1 549	2 515	38.4	61.6	100
Tas.	858	955	1 813	47.3	52.7	100
NT	227	274	501	45.3	54.7	100
ACT	316	418	734	43.1	56.9	100
Aust.	7 616	10 152	17 768	42.9	57.1	100

HES selected dwellings, sample loss and selected households

Of the selected dwellings for HES there were 17,873 households in the scope of the survey. Of this initial sample, 2,579 dwellings (14%) were excluded as no contact was able to be made (e.g. vacant dwelling, holiday homes). A further 5,220 (29%) did not respond at all to the questionnaire, or did not respond adequately. Most of these were not able to take part in the survey during the collection period or were contacted but either refused to respond or were not able to respond adequately. The remainder of these households included:

- households affected by death or illness of a household member; and
- households which did not respond because due to communication barriers or because they refused to participate (9.5% of all contacted households).

110 households were excluded because the main income earners in the household did not adequately respond to questions about income sources and amounts. 229 households that were collected as part of the HES sample but did not have sufficient expenditure diary information were retained as part of the SIH sample. 74 households were retained after repair to an instrument error.

In 2015-16 HES, 34 selected dwellings were split into two households and 12 were split into three or more households.

Final HES sample

Of the selected dwellings (15,294) that were contacted and in scope of the survey, 10,046 (66%) households were included as part of the final estimates.

HES FINAL SAMPLE, 2015-16

	GREATER CAPITAL CITY		REST OF STATE		TOTAL	
	Households	Persons (a)	Households	Persons (a)	Households	Persons (a)
	no.	no.	no.	no.	no.	no.
NSW	1 778	4 344	479	1 151	2 257	5 495
Vic.	2 004	4 761	386	866	2 390	5 627
Qld	1 050	2 491	439	1040	1 489	3 531

SA	1 044	2 332	254	537	1 297	2 869
WA	1 002	2 365	216	543	1 215	2 908
Tas.	557	1 242	204	428	763	1 670
NT	259	603	81	189	337	792
ACT	293	734	-	-	295	734
Aust.	7 987	18 872	2 059	4 754	10 046	23 626

- nil or rounded to zero (including null cells)

(a) Number of persons aged 15 years and over

The HES sample is not evenly balanced over the course of the year. Due to under-performance of the sample design in the first half of the collection year, a top-up sample was selected and collected from January - July 2016. The fully responding households by each half of the collection year are provided in the table below.

Weights adjust by quarter to ensure representativeness across the year.

FULLY RESPONDING HOUSEHOLDS, 2015-16 collection year

	July-December 2015	January-July 2016	Full Collection Period	July- December 2015	January-July 2016	Full Collection Period
	no.	no.	no.	%	%	%
NSW	893	1 364	2 257	39.6	60.4	100.0
Vic.	980	1 410	2 390	41.0	59.0	100.0
Qld	567	922	1 489	38.1	61.9	100.0
SA	548	750	1 298	42.2	57.8	100.0
WA	470	748	1 218	38.6	61.4	100.0
Tas.	333	428	761	43.8	56.2	100.0
NT	154	186	340	45.3	54.7	100.0
ACT	119	174	293	40.6	59.4	100.0
Aust.	4 064	5 982	10 046	40.5	59.5	100.0

Additional pensioner sample

The collection methodology for the pensioner sample was a two phase approach. In the first phase, a large number of households were required to answer a number of short screening questions to identify whether they were a pensioner household. In the second phase, one in four of the in scope selected households were selected for inclusion in HES survey regardless of the screening outcome. In addition, households which were screened as pensioner households were selected for interview using the same collection methodology as for the HES. The screening questions are included in the downloads tab of this publication. For the 2015-16 additional pensioner sample, 23,870 dwellings were screened. After the screening process 5,845 households were approached to complete the SIH and HES surveys. There were 3,603 households from this approached sample that responded with sufficient information to be included within the final SIH and HES samples.

Data collection and processing

DATA COLLECTION AND PROCESSING

DATA COLLECTION

Interview procedures

Trained ABS interviewers were used to collect Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) data. They were given comprehensive training and were provided with detailed written instructions to complement the survey documents.

Information for each household was collected using:

- a household level computer assisted personal interview questionnaire which collected information on

household characteristics, housing costs, expenditure common to all household members (e.g. utility bills), and irregular or infrequent expenditure (e.g. household appliances and holidays overseas) and certain assets and liabilities for all households;

- an individual level computer assisted personal interview questionnaire which collected information on income, certain assets and liabilities, and personal characteristics from each usual resident aged 15 years and over in all households; and
- a personal diary in which usual residents aged 15 years and over in households selected for the HES recorded their expenditure over two weeks.

For SIH (only) interviews, the interviewer:

- made an initial contact visit, in which they obtained information on the numbers and characteristics of people usually resident in the dwelling. If a responsible adult was not available, the interviewer called back at another time. The interviewer also arranged a convenient time to call back to conduct the interviews;
- completed one household questionnaire for each household (information was provided by a household spokesperson who was nominated as the best person to provide information on the financial situation of the household);
- completed an individual questionnaire for each usual resident aged 15 years and over; and
- completed a proxy interview when the parent/guardian of children in the household aged 15–17 years, did not give permission for them to be personally interviewed, or when a person was incapable of answering on their own behalf.

For HES (including SIH) interviews the following process was followed:

In the initial contact interview, the interviewer:

- obtained information on the number and characteristics of people usually resident in the dwelling. If a responsible adult was not available, the interviewer called back at another time
- distributed the first week's diaries to each usual resident aged 15 years and over, in households selected for the HES
- arranged a suitable appointment time for the Diary Assistance Visit and other visits where possible for the HES.

The Diary Assistance Visit occurred two to four days after the diaries had been placed. The purpose of this visit was to answer respondent questions on the expenditure Diary. The diaries were checked at this visit and any discrepancies clarified with the respondent(s).

The Diary Exchange Visit occurred eight days after the first diaries were distributed. The purpose of this visit was to collect the first week's diaries and distribute the second week's Diaries.

The Group Interview was conducted with all usual residents aged 15 years and over in the household present.

The Individual Interviews were conducted with each usual resident in on scope, that is, all persons aged 15 years or over, who were not a member of a foreign defence force (stationed in Australia) or diplomatic personnel of overseas governments.

The Diary Collection Visit occurred to collect the diaries for the second week. During this visit diaries were checked and collected. If interviewers were unable to collect the completed diaries from respondents during the relevant visits respondents were offered a reply paid envelope to mail back their diaries.

Data collection instruments

A representation of the computer-assisted interview (CAI) questionnaires used in the SIH and HES and the HES expenditure diary can be downloaded as separate PDF files available from the 'Downloads' tab of this publication.

DATA ITEMS

For details of the data items available from the 2015–16 SIH and HES see the Excel spreadsheet available as a data cube from the 'Downloads' tab of this publication in late 2017.

DATA PROCESSING AND DERIVATIONS

Data processing methods

Computer based systems were used to collect and process the data from the 2015-16 SIH and HES with a software program known as BLAISE. A variety of methods were employed to process and edit the data, reflecting the different questionnaires used to collect data from the household and individual components of the surveys. These processes are outlined below:

Coding and input editing of household and individual questionnaires

Internal system edits were applied in the CAI questionnaires to ensure the completeness and consistency of the responses being provided. The interviewer could not proceed from one section of the interview to the next until responses had been appropriately completed.

A number of range and consistency edits were programmed into the CAI questionnaire. Edit messages automatically appeared on the screen if the information entered was either outside the permitted range for a particular question, or contradicted information already recorded. These edit queries were resolved on the spot with respondents.

Data from the CAI questionnaires were electronically loaded to the processing database on receipt in the ABS office in each state or territory. Office checks were made to ensure data for all relevant questions were fully accounted for and that returns for each household and respondent were obtained. Problems identified by interviewers were resolved by office staff, where possible, based on other information contained in the schedule, or on the comments provided by interviewers.

Computer-assisted coding was performed on responses to questions on country of birth, occupation and industry of employment and language to ensure completeness. Data on relationships between household members were used to delineate families and income units within the household, and to classify households and income units by type.

Data capture and coding of individual HES diaries

For HES households diaries were collected by interviewers and dispatched to the ABS office where all reported expenditures in the diaries were entered into the BLAISE Diary Processing System by a diary coding team. The BLAISE system helped operators to code diary items into Household Expenditure Code (HEC) codes. A trigram coder enabled operators to select the appropriate goods or services from an alphabetically ordered pick list of options. The system also deleted expenditure recorded in the diaries on items covered by the household questionnaire. For example, the household questionnaire collected information on mains gas payments so any payments coded to HEC code 0201010201 (Mains gas - (selected dwelling)) were automatically deleted to prevent double counting.

The HEC coding list is a complete list of items classified to each expenditure code and is available for researchers who require a detailed knowledge of the content of each expenditure code (see the HEC coding list in Appendix 7). For example, a researcher may need to know the contents of HEC code 0309030101 (Potato crisps and other savoury confectionery) which the HEC coding list shows to contain Burger rings, Cheezels, chips (crisps), corn chips, Le Snak, pretzels, Twisties and many other products. During coding of the diary data, goods not already listed in the coding list and variant wording of reported expenditures were able to be added to the coding list. Complex queries during the coding process were sent to a query resolution team to determine how the expenditure should be coded and to ensure consistency across the coding.

Respondents were encouraged to attach dockets where possible when completing their diary. Store lists were obtained from several major retailers and pre-loaded into the diary coding system. These store lists provided information about the types of items sold by the retailer and were used to improve efficiency and quality of diary coding. These store lists were used to automatically populate some coded fields such as the description of the item and the HEC code where a match between the docket item and the store list could be found.

Additional editing

A range of edits was also applied to the diary, household and individual information to double check that logical sequences had been followed in the questionnaires; that specific values lay within expected ranges; and that relationships between items were consistent. Unusually high values (termed statistical outliers) were investigated to determine whether there had been errors in entering the data and corrections were made where necessary.

Imputation for missing records and values

Some households did not supply all the required information but supplied sufficient principal information to be retained in the sample. Such partial responses occur when:

- income or other data in a questionnaire are missing from one or more non-significant person's records because they are unable or unwilling to provide the data,
- all key questions are answered by the significant person(s) but other questions are not answered. Significant person(s) are the main income earners for the household (e.g. both parents in a couple family with children

- household, half of all persons in a group household, see glossary for further information)
- diaries are not fully completed (for HES households only)

In the first two cases of partial response above, the data provided are retained and the missing data are imputed by replacing each missing value with a value reported by another person with similar characteristics, referred to as the 'donor'.

Donor records are randomly selected by finding fully responding persons with matching information on multiple characteristics, such as state, sex, age, labour force status and income, as the person with missing information. As far as possible, the imputed information is an appropriate proxy for the information that is missing. Depending on which values are to be imputed, donors are randomly chosen from the pool of individual records with complete information for the block of questions where the missing information occurs.

In the third case for HES households, non-significant respondents who did not sufficiently complete either a week one diary or a week two diary, had diary data imputed from a fully responding donor. If all significant persons within the household failed to supply either diaries, then the household was converted to a SIH household for sample retention. In other cases if the first week of diary entries was provided but not the second week, then the first week of expenditure is used to represent expenditure for the second week.

In the SIH sample 388 partially responding households were retained in the final sample after full record imputation of person(s) in the household who were not the main income earners. For these households, any missing values were imputed by replacing each missing value with a value reported by another person (referred to as the donor).

The final SIH sample includes 5,117 households (29% of households) and 8,079 person records (24% of persons aged 15 years or over) which had at least one imputed value. Of all the relevant items (continuous variables), 3.5% of values were imputed. This is slightly lower than in SIH 2013-14 (3.9%) and slightly higher than in the last SIH cycle where HES was jointly collected (2.6%). 244 full records were imputed (0.5% of all SIH person level records).

In the HES sample 237 partially responding households were retained in the final sample after full record imputation of person(s) in the household who were not the main income earners. For these households, any missing values were imputed by replacing each missing value with a value reported by another person (referred to as the donor).

The final HES sample includes 3,487 households (35% of households) and 4,762 person records (25% of persons aged 15 years or over) which had at least one imputed value. 154 full records were imputed (0.5% of all HES person level records).

MODELLED ITEMS

Modelled data items

Some data items of interest cannot reliably be collected from respondents, and some cannot be collected at all. However, it is sometimes possible to utilise other information provided by respondents as a basis for estimating the data items of interest. This process is referred to as modelling.

Child Care

Childcare subsidies assist families with dependent children with the costs of childcare. Two subsidies are collected and modelled in the 2015–16 SIH. These are the Child Care Benefit and Child Care Rebate.

Child Care Benefit (CCB) is a payment from the Australian Government that assists families with the costs of registered or approved child care. The scheme is means-tested and allocates an hourly amount that can either be provided to child care consumers after child care has been paid, or directly paid to child care providers, thereby reducing the upfront child care fees payable by the consumer.

Child Care Rebate (CCR) is also an Australian Government payment that, like CCB, assists families with the cost of child care. Each childcare consumer is entitled to CCR, which is 50% of their net childcare costs. That is, a childcare consumer is entitled to 50% of their childcare costs after CCB has been deducted from the cost if they receive it, or else 50% of the whole cost. CCR payments accrue up to a per child, per year limit (\$7,500 per child per year in 2015–16). CCR, like CCB, may be paid either to the consumer in a lump sum or directly to childcare providers, thereby further reducing the upfront cost of childcare.

Estimates of CCB and CCR are collected from the child care questions, however there has been a substantial gap between the reported number of households receiving childcare subsidies and the total value of that assistance, compared to administrative records. CCB and CCR have been modelled to improve the accuracy of estimates of these payments. The output data is made up of both reported and modelled data. Child care assistance is conceptually treated as social transfers in kind, including administrative overhead as part of the value of the

transfer.

The modelled amounts of CCB and CCR are available at the household and income unit level.

Income tax and the Medicare levy and levy surcharge

Disposable income is calculated by deducting income tax, including the Medicare levy, from gross income.

The model is based on the liability rules described in the Tax Pack from the Australian Tax Office for the year concerned, the income reported by respondents, and other characteristics of household members reported in the survey.

Estimates of income tax are modelled, rather than collected from respondents, for a number of reasons including:

- An accruals approach is taken to estimating these items. The estimates relate to the tax liability being incurred with respect to the income being reported by the respondent in the survey. For estimates of current income, the current income tax liability is calculated as though the current income is the average income for the whole year. If actual income fluctuates during the year, respondents are unlikely to have an actual income tax assessment that is relevant to the required estimate.
- In addition to income changes during the course of the year, full year income tax assessments may be affected by changes in family or other circumstances of the respondent which are not described in the survey, and are best ignored when deriving an income tax estimate to use with the other survey data.
- Income tax assessments are only made after the end of the financial year, and therefore are not yet available at the time that current income is collected from respondents.
- The income tax assessment of respondents may be affected by certain expenditures which they make, such as donations to charities or other particular circumstances which are not captured in the survey. For many purposes it is desirable to exclude the impact on tax liabilities of specific influences which are not captured in the survey.
- The SIH provides sufficient relevant information to allow a relatively comprehensive tax model to be constructed.

The Medicare levy surcharge and the Budget Repair Levy were also modelled and deducted from gross income in the calculation of disposable income.

For more information see the 'Income' section of this publication.

Hours usually worked in second job

In SIH and HES 2015-16, an isolated issue with the survey instrument occurred where respondents working more than one job were not asked to specify the hours they usually worked in their second job. As a result, data for hours usually worked in the second job for employees was modelled based on the respondents reported data, including their usual hours of work in their main job and the income reported for their main and second jobs. This model was developed based on the relationships found between these variables in previous cycle data. For people working in their own business, the hours usually worked was randomly imputed as previous cycle data did not show the same relationships that were found for employee hours. The items impacted by this issue are:

- Number of hours usually works in second job (HRSWK2CP)
- Total hours worked per week (HRSWKACP)
- Full-time/part-time labour force status (FTPTSTEU)
- Status in employment (second job) (STEMP2CP)
- Number of additional hours parent would like to work (ADDHRS)
- Labour force status (LFSCP)

This issue has been resolved in the survey instrument for the 2017-18 SIH collection.

Governments payment modelling

The microediting of income from government payments has been improved in terms of accuracy. The ABS has introduced an eligibility-based model designed by the Department of Social Services. This model produces a value for every person aged 15 years or over for all government payments and allowances that are collected in the survey. The modelled amount is then compared to the reported government payment values to identify and edit values that are significantly higher than the maximum amount eligible, to impute missing values and to impute values for payments which are consequential on the basis of reported payments (e.g. a value for Utilities Allowance is allocated to all recipients of Partner Allowance, even those who did not separately report it). All other government payments' values remain as reported. Some payment values are entirely modelled based on eligibility as in previous cycles of SIH. More information about the new model will be available in appendix 9 of the User Guide later in 2017. Microdata products (e.g. the Basic CURF) will include both the reported and modelled values for

comparison (except where the reported payment values were out of the possible range or missing).

Receipts of Family Tax Benefit are treated as income, regardless of whether they are received fortnightly or as a lump sum. The Newborn Supplement and Newborn Upfront Payment replaced the Baby Bonus on 1 March 2014 and those eligible receive it as part of their Family Tax Benefit Part A payments for a period of 13 weeks or with their lump sum. The Paid Parental Leave payment has also been included as income.

The Energy Supplement is included in income from government pensions or allowances. This tax-exempt, indexed payment is paid to pensioners, other income support recipients, families receiving Family Tax Benefit payments and Commonwealth Seniors Health Card holders, provided they meet eligibility requirements.

The twice-yearly Schoolkids bonus payment that was paid to eligible families, carers and students from January 2013 to July 2016 has been included in income from government pensions and allowances. This payment, paid in January and July, was made payable to families receiving Family Tax Benefit Part A. Young people enrolled in school who were receiving Youth Allowance and other specific income support or receiving an education allowance from Department of Veteran's Affairs are also entitled to this payment, providing that they meet the age and education requirements.

Weights

WEIGHTS

BENCHMARKS AND WEIGHTING METHOD

Weighting is the process of adjusting results from a sample survey to infer results for the total in scope population whether that be persons, income units or households. To do this, a 'weight' is allocated to each sample unit e.g. a person or a household. The weight is a value which indicates how many population units are represented by the sample unit. The first step in calculating weights for each unit is to assign an initial weight, which is the inverse of the probability of being selected in the survey. For example, if the probability of a household being selected in the survey was one in 600, then the household would have an initial weight of 600 (that is, it represents 600 households).

The initial weights are then calibrated to align with independent estimates of the population of interest, referred to as benchmarks. Weights calibrated against population benchmarks ensure that the survey estimates conform to the independently estimated distribution of the population rather than to the distribution within the sample itself. The calibration also includes an adjustment to account for differences in the sample enumerated in each of the four quarters over the year. This is a change from previous cycles of SIH where the quarter adjustment was made to initial weights rather than at the calibration step.

Most of the independent person and household benchmarks are based on demography estimates of numbers of persons and households in Australia. The benchmarks are adjusted to include persons and households residing in private dwellings only and to exclude persons living in very remote areas, and therefore do not, and are not intended to, match estimates of the Australian resident population published in other ABS publications. The demography estimates of persons (estimated resident population - ERP) and households used in SIH 2015–16 are built up from the 2011 Census.

SIH weighting

In the 2015–16 SIH, as in 2007–08, 2009–10 and 2011–12 and 2013–14, all persons in each household were assigned a weight. This differs from the 2005–06 SIH where children aged 0–14 years were not given separate weights, but household counts of the number of children were benchmarked to population totals.

As in 2009-10, an additional sample was used to provide detailed income and expenditure information for households where the main source of income is government pensions, benefits and allowances. The additional households completed the full SIH questionnaire and contribute to the published SIH estimates. The pensioner sample is incorporated using a pooled estimation approach. This differs from the method used in 2009-10, where the base HES and additional pensioner samples were combined using composite estimation after weighting each component separately.

The benchmarks used in the calibration of the final weights for the 2015–16 SIH were:

- number of persons -
 - by state or territory by labour force status ('Employed', 'Unemployed' and 'Not in the labour force') (except NT which does not use labour force status); and
 - by state or territory by age by sex;

- in five year age groups up to 80+ years for all states and territories (excluding NT);
 - in five year age groups up to 70+ years for the NT;
- numbers of households -
 - by state, by indexation quarter by capital city/balance of state (except NT and ACT which only use state);
 - by state, by household composition (number of adults (1, 2 or 3+) and whether or not the household contains children) (except NT which only uses whether or not the household contains children).
- value of government benefit cash transfers -
 - consisting of age pension, family tax benefit, disability support pension, newstart, parenting payments, carer payment, Commonwealth rent assistance, youth allowance, carer allowance, school kids bonus, Austudy/Abstudy, carer supplement, widow allowance, wife pension, sickness allowance, partner allowance, special benefit, utilities allowance, pension supplement, service pension, war widow(er)'s pension.

HES weighting

In the 2009-10 and 2015-16 HES, all persons in each household were assigned a weight. The final SIH weights were used as the initial weights for the HES, with a sub-sampling adjustment being applied to incorporate the additional pensioner sample. This differs from the method used in 2009-10, where the base HES and additional pensioner samples were combined using composite estimation after weighting each component separately.

The HES survey was benchmarked to the in scope estimated resident population (ERP) and the estimated number of households in the population, and to a number of estimates produced from the SIH and the Monthly Population Survey. ERP benchmarks were preliminary, based on the 2011 Census. An additional benchmark using administrative payment data was applied for households that received government payments.

The population benchmarks used in the calibration of the final weights for the 2015-16 HES were:

- number of persons -
 - by state or the ACT by labour force status ('Employed', 'Unemployed' and 'Not in the labour force'); and
 - by state or territory by age by sex;
 - five year age groups up to 80+ years for NSW, Vic., Qld., SA and WA;
 - ten year age groups up to 70+ years for the Tas., NT and ACT;
- number of households -
 - by state, by pension indexation quarter, by greater capital city area/balance of state (excluding NT and the ACT which only use state);
 - by state, by household composition (number of adults (1,2 or 3+) and whether or not the household contains children; excluding the NT which uses only number of adults of 1+).

In addition to the population benchmarks presented above, the following SIH estimates were used as benchmarks at the state level in weighting the HES sample:

- total weekly household income from all sources;
- total weekly household income from own unincorporated business;
- total weekly household income from wages and salaries;
- total weekly household income from government pensions and allowances; and
- household tenure type.

The independent person and household benchmarks are based on demography estimates of numbers of persons and households in Australia, except for the labour force benchmarks which are based on the Monthly Population Survey. The benchmarks are adjusted to include persons and households residing in private dwellings only and to exclude persons living in very remote areas, and therefore do not, and are not intended to, match estimates of the Australian resident population published in other ABS publications.

Composite estimation

Composite estimation was used to obtain the optimal proportions for combining the targeted sample and main HES sample of pensioner households at a state level.

The Pensioner sample was assigned independent initial probability weights as it was selected separately from the SIH and HES samples. The initial weights were calibrated to the same population benchmarks as used in the SIH calibration with broader grouping of the benchmarks to accommodate the smaller sample size. The calibration also included an adjustment to ensure that the observed proportion of identified pensioner households from the subsample selected to complete the survey regardless of screening result was maintained.

In order to derive the most accurate combined estimates for the SIH, HES and additional pensioner samples, composite estimation was used. This method calculates the optimal proportion for combining estimates from the main SIH and the additional pensioner samples at the State by part of state (the additional pensioner sample includes only Metropolitan) by pensioner/non-pensioner household level.

The composite estimates are given by

$$\hat{Y}_{Composite} = a\hat{Y}_{HIES} + (1 - a)\hat{Y}_{PHES}$$

where $\hat{Y}_{Composite}$ is the final composite estimate of some population parameter, \hat{Y}_{HIES} is the SIH sample estimate and \hat{Y}_{PHES} is the additional pensioner sample estimate of that parameter. The composite estimation coefficients (a , $1-a$) of the optimal proportions are the values that minimise the variance of the composite estimate. The values of a were calculated using the total income variable. Weights are then multiplied by a for SIH sample and $(1-a)$ for the additional pensioner sample to achieve optimised composite weights.

After the main SIH and PHES samples were combined a final benchmarking calibration was applied to ensure that the final weights align with population benchmarks.

Consistency of SIH and HES estimates

Although the HES and the SIH are integrated, the estimates for common items published in both the SIH publication Household Income and Wealth, Australia, 2015-16 (cat. no. 6523.0) and HES publication Household Expenditure Survey 2015-16, Summary of Results (cat. no. 6530.0) are unlikely to have exactly the same values, unless calibrated between the surveys. The estimates taken from only the HES subsample are subject to greater sampling variability than the full SIH estimates.

Estimation

Estimates produced from the SIH and HES are usually in the form of averages (e.g. average weekly income of couple households with dependent children), or counts (e.g. total number of households that own their dwelling or total number of persons living in households that own their own dwelling). For counts of households, the estimate was obtained by summing the weights for the responding households in the required group (e.g. those owning their own dwelling). For counts of persons, the household weights were multiplied by the number of persons in the household before summing. The SIH and HES collect data on the number of people, including children, in each household but separate records with income and most detailed data were only collected for people 15 years and older.

Average income values are obtained in two different ways, depending on whether mean gross household income or mean equivalised disposable household income is being derived. Estimates of mean gross household income are calculated on a household weighted basis. They are obtained by multiplying the gross income of each household by the weight of the household, summing across all households and then dividing by the estimated number of households. For example, the mean gross household income of couple households with dependent children is the weighted sum of the gross income of each such household divided by the estimated number of those households.

Estimates of mean equivalised disposable household income are calculated on a person weighted basis. They are obtained by multiplying the equivalised disposable income of each household by the number of people in the household (including children) and by the weight of the household, summing across all households and then dividing by the estimated number of people in the population group.

Averages are obtained by adding the weighted household values, and then dividing by the estimated number of households. For example, average weekly expenditure on clothing and footwear by Victorian households is the weighted sum of the average weekly expenditure of each selected household in Victoria who reported such expenditure, divided by the estimated number of households in Victoria. Note that the denominator is the total number of households and not just the number of households which reported expenditure on a particular item.

Reliability of estimates

RELIABILITY OF ESTIMATES

SAMPLING VARIABILITY

The estimates provided from the Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) are subject to two types of error, non-sampling and sampling error.

Comparisons between estimates from surveys conducted in different periods, for example, comparison of 2015-16 SIH and HES estimates with previous cycle estimates, are also subject to the impact of any changes made to the way the survey is conducted. For further details on changes between cycles see the 'Historical information' section of this publication.

Non-sampling error

Non-sampling error can occur in any collection, whether the estimates are derived from a sample or from a complete collection such as a census. Sources of non-sampling error include non-response, errors in reporting by respondents or recording of answers by interviewers and errors in coding and processing the data.

Non-sampling errors are difficult to quantify in any collection. However, every effort is made to reduce non-sampling error to a minimum by careful design and testing of the questionnaire, training of interviewers and data entry staff, and extensive editing and quality control procedures at all stages of data processing.

One of the main sources of non-sampling error is non-response by persons selected in the survey. Non-response occurs when people cannot or will not cooperate or cannot be contacted. Non-response can affect the reliability of results and can introduce a bias. The magnitude of any bias depends upon the level of non-response and the extent of the difference between the characteristics of those people who responded to the survey and those who did not.

The following methods were adopted to reduce the level and impact of non-response:

- Primary Approach Letters (PALs) were posted to selected SIH and HES households prior to enumeration;
- document cards were provided to respondents to suggest having financial statements and similar documents handy at the time of interview to assist with accurate responses;
- face-to-face interviews with respondents;
- the use of interviewers who could speak languages other than English, where necessary;
- proxy interviews conducted when consent is given, with a responsible person answering on behalf of a respondent incapable of doing so themselves;
- follow-up of respondents if there was initially no response;
- imputation of missing values;
- ensuring that the weighted data is representative of the population (in terms of demographic characteristics) by aligning the estimates with population benchmarks; and
- ensuring that the HES weighted data is consistent with the larger SIH sample by aligning the key HES income estimates with key SIH estimates.

Sampling error

The estimates are based on a sample of possible observations and are subject to sampling variability. The estimates may therefore differ from the figures that would have been produced if information had been collected for all households. A measure of the sampling error for a given estimate is provided by the standard error, which may be expressed as a percentage of the estimate.

The estimates from the SIH and HES are based on information obtained from the occupants of sampled dwellings. Therefore, the estimates are subject to sampling variability and may differ from the population parameters that would have been observed if information had been collected for all dwellings.

One measure of the likely uncertainty is given by the standard error estimate (SE), which indicates the extent to which a sample estimate might have varied compared to the population parameter because only a sample of dwellings were included. There are about two chances in three that the sample estimate will differ by less than one SE from the population parameter that would have been obtained if all dwellings had been enumerated, and about 19 chances in 20 that the difference will be less than two SEs. Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate.

For estimates of population sizes, the size of the SE generally increases with the level of the estimate, so that the larger the estimate the larger the SE. However, the larger the sampling estimate the smaller the SE becomes in percentage terms. Thus, larger sample estimates will be relatively more reliable than smaller estimates.

Estimates with RSEs of 25% or more are not considered reliable for most purposes. Estimates with RSEs greater than 25% but less than or equal to 50% are annotated by an asterisk to indicate they are subject to high SEs and should be used with caution. Estimates with RSEs of greater than 50%, annotated by a double asterisk, are

considered too unreliable for general use and should only be used to aggregate with other estimates to provide derived estimates with RSEs of 50% or less.

RSEs for the SIH and HES have been derived using the delete-a-group jackknife method. If needed, SEs can be calculated using the estimates and RSEs.

MEASURES OF RELIABILITY

Proportions and percentages

Proportions and percentages, which are formed from the ratio of two estimates, are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. For proportions where the denominator is an estimate of the number in a grouping and the numerator is the number in a subgroup of the denominator group, the formula for an approximate RSE is given by:

$$RSE\% \left(\frac{x}{y} \right) = \sqrt{[RSE\%(x)]^2 + [RSE\%(y)]^2}$$

The RSE estimates for proportions listed in SIH and HES published output calculate the effect of correlations between the numerator and the denominator.

Differences between estimates

The difference between survey estimates is also subject to sampling variability. An approximate SE of the difference between two estimates (x–y) may be calculated by the formula:

$$SE(x - y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

This approximation can generally be used whenever the estimates come from different samples, such as two estimates from different years or two estimates for two non-intersecting subpopulations in the one year. If the estimates come from two populations, one of which is a subpopulation of the other, the standard error is likely to be lower than that derived from this approximation.

Significance testing

When comparing estimates between surveys or between populations within a survey, it is useful to determine whether apparent differences are 'real' differences between the corresponding population characteristics or simply the result of sampling variability between the survey samples. One way to examine this is to determine whether the difference between the estimates is statistically significant. This is done by calculating the standard error of the difference between two estimates (x and y), see the 'Differences between estimates' section above, and applying that to calculate the test statistic using the formula below:

$$\frac{|x-y|}{SE(x-y)}$$

If the value of this test statistic is greater than 1.96 (at the 95% confidence level) then there is good evidence of a statistically significant difference between the two population estimates with respect to that characteristic. Otherwise, it cannot be stated with confidence that there is a real difference between the population estimates.

Classifications and standards

CLASSIFICATIONS AND STANDARDS

The following classifications and standards have been utilised in the 2015–16 Survey of Income and Housing (SIH) and Household Expenditure Survey (HES):

GEOGRAPHY

Data collected in 2013–14 SIH and 2015–16 SIH and HES are based on the current Australian Statistical Geography Standard (ASGS) and prior cycles are based on the Australian Standard Geographical Classification (ASGC). While the ASGS will give a better platform for the analysis of time series into the future, it will also create a break in time series at the sub-state level that were based on the ASGC.

The ASGS is the ABS' new geographical framework, which replaced the ASGC from July 2011.

The ASGS has been modified to extend beyond the Statistical Area Level 4 (SA4). The new ASGS structure is based on the Greater Capital City Statistical Areas (GCCSAs). GCCSAs have been designed to provide a stable and consistent boundary that reflects the functional extent of each of Australia's capital cities. GCCSAs have been created using aggregations of whole SA4s which were designed to reflect the labour market. Hence, GCCSAs are quite different from SA4s since they cover an area outside of the capital city district of each state and territory. For more information refer to the publication Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016 (cat. no. 1270.0.55.001) and <https://www.abs.gov.au/geography>.

The ASGC provided a common framework of statistical geography which enabled the production of statistics that are comparable and can be spatially integrated. For more information refer to the publication Australian Standard Geographical Classification (ASGC) (cat. no. 1216.0) and <https://www.abs.gov.au/geography>.

Geography items output from the SIH and HES include:

- Remoteness Areas 2011
- State or Territory of usual residence 2011
- Statistical Area Level 1 (SA1) 2011
- Index of relative socio-economic disadvantage - decile - Australia 2011
- Index of relative socio-economic disadvantage - decile - state 2011
- Index of relative socio-economic advantage/disadvantage - quintiles - Australia 2011
- Greater Capital City Statistical Areas Code ASGS 2011
- Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA)

Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA)

The Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA) is a geographic index which quantifies service accessibility within metropolitan areas. The index reflects the ease or difficulty people face accessing basic services within metropolitan areas, derived from the measurement of road distances people travel to reach different services, and covers five different service themes:

- education;
- health;
- shopping;
- public transport; and
- financial/postal services.

Metro ARIA covers 2011 Greater Capital City Statistical Area (GCCSA) by 2011 Statistical Area 1. Areas outside GCCSAs are defined as non-metropolitan. Non-metropolitan should not be interpreted as lower accessibility; it is simply that the region is located outside the capture area detailed Metro ARIA. Further information regarding Metro ARIA and maps can be found via the following link: <https://aurin.org.au/projects/data-hubs/metro-aria/>

The Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA) enables analysis of economic wellbeing and expenditure in relation to accessibility of services for metropolitan areas and summary results can be found in Household Expenditure Survey 2015–16, Summary of Results (cat. no. 6530.0).

COUNTRY OF BIRTH

The Standard Australian Classification of Countries (SACC), 2011 is the Australian statistical standard for social statistics classified by country and is intended for use in the collection, storage and dissemination of all Australian social statistical data classified by country.

The identification of country units in the classification, and the way in which they are grouped, does not imply the expression of any opinion on the part of the ABS concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries.

The ABS uses the SACC and promotes its use by other government agencies, private organisations, community groups, and individuals, where appropriate.

For more information refer to the publication Standard Australian Classification of Countries (SACC), (cat. no. 1269.0).

Country of birth items output from the SIH and HES include:

- Country of birth of HH reference person - 4 digit ASCC
- Country of birth - 4 digit ASCC

EDUCATION ATTAINMENT

The Australian Standard Classification of Education (ASCED) is a statistical classification for use in the collection and analysis of data on educational activity and attainment. The ASCED includes all sectors of the Australian education system; that is, schools, Vocational Education and Training and Higher education. ASCED is comprised of two component classifications: 'Level of Education' and 'Field of Education'. It provides a basis for comparable administrative and statistical data on educational activities and attainment classified by level and field.

Information relating to the conceptual basis of ASCED, the structure of the classification, definitions for all categories of level and field and concordances with other education classifications can be found in the publication Australian Standard Classification of Education (ASCED) (cat. no. 1272.0).

The educational attainment items available from the SIH and HES include:

- Level of highest educational attainment
- Main field of highest educational attainment - 6 digit ASCED

AUSTRALIAN AND NEW ZEALAND STANDARD INDUSTRIAL CLASSIFICATION (ANZSIC)

The ANZSIC has been jointly developed by the ABS and Statistics New Zealand (Statistics NZ). The ANZSIC provides a basis for the standardised collection, analysis and dissemination of economic data on an industry basis for Australia and New Zealand. Use of the ANZSIC results in improved comparability of industry statistics produced by the two countries.

As well as being the standard industrial classification that underpins ABS and Statistics NZ industry statistics, the ANZSIC is widely used by government agencies, industry organisations and researchers for various administrative, regulatory, taxation and research purposes throughout Australia and New Zealand. Industry of main job is output from the SIH and HES at the 3 digit level.

For more information refer to the publication Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 2.0) (cat. no. 1292.0).

AUSTRALIAN AND NEW ZEALAND STANDARD CLASSIFICATION OF OCCUPATIONS (ANZSCO)

The ANZSCO was the product of a development program undertaken jointly by a project team from the ABS, Statistics New Zealand (Statistics NZ) and the Australian Government Department of Education, Employment and Workplace Relations for use in the collection, publication and analysis of occupation statistics. ANZSCO provides a basis for the standardised collection, analysis and dissemination of occupation data for Australia and New Zealand. The use of ANZSCO has resulted in improved comparability of occupation statistics produced by the two countries.

ANZSCO is intended to provide an integrated framework for storing, organising and reporting occupation-related information in both statistical and client-oriented applications, such as matching job seekers to job vacancies and providing career information. Occupation of main job is output from the SIH and HES at the 6 digit level.

For more information refer to the publication ANZSCO - Australian and New Zealand Standard Classification of Occupations, 2013, Version 1.2 (cat. no. 1220.0).

LANGUAGE

First language spoken and main language spoken at home are collected for all persons aged 15 and over in the 2015-16 SIH and HES. The Australian Standard Classification of Languages (ASCL) (cat. no. 1267.0) is used to classify languages for these data items and is coded at the 4 digit level for this classification.

EXPENDITURE

Expenditure is classified according to the HEC – for more detail, see Appendix 6 'Household Expenditure Classification'.

Most of the approximately 700 items included in the classification relate to expenditure on goods and services,

which is the primary focus of the HES. The classification also includes 'selected other payments' which comprise income tax, repayments on mortgage principal for the household's place of residence, other housing costs of a capital nature such as internal renovations, superannuation and life insurance.

The commodity codes for the Household Expenditure Classification (HEC) are largely the same as in 2009-10 with a small number of changes, particularly to address emerging technologies and industries between the survey cycles. Estimates for previous cycles have been recompiled to reflect these changes at a broad expenditure level. The list of commodity codes for 2015-16 HES and a concordance with the 2009-10 HEC is included in Appendix 6 of this publication. The expenditure estimates have also been derived for the Classification of Individual Consumption by Purpose (COICOP). The total expenditure estimates differ between the two classifications due to scope differences, in particular the COICOP includes estimates of imputed rent which are out of scope for the HEC. For more detail, see Appendix 8 'HEC and COICOP concordance'.

WEALTH CLASSIFICATION

The Wealth Classification is based on the Organisation for Economic Co-operation and Development (OECD) Framework for Statistics on the Distribution of Household Income, Consumption and Wealth and the OECD Guidelines for Micro Statistics on Household Wealth. It categorises various assets and liabilities that comprise net worth of a household or person.

OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth

An internationally agreed framework to support the joint analysis of micro-level statistics on household income, consumption and wealth. Its aim is to extend the existing international frameworks for measuring household income and consumption at the micro level to include wealth, and describes income, consumption and wealth as three separate but interrelated dimensions of people's economic well-being. The framework, prepared by an international expert group working under the auspices of the OECD, is intended to assist national statistical offices and other data producers to develop data sets at the household level that are suitable for integrated analysis, and for facilitating comparisons between countries. The Framework is widely applicable, with relevance to countries that are at different stages of statistical development, that have different statistical infrastructures, and that operate in different economic and social environments.

For more information refer to the publication OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth (2013).

OECD Guidelines for Micro Statistics on Household Wealth

An internationally agreed set of guidelines for producing micro statistics on household wealth. It addresses the common conceptual, definitional and practical problems that countries face in producing such statistics, and are meant to improve the comparability of the currently available country data. The Guidelines, prepared by an international expert group working under the auspices of the OECD, propose a set of standard concepts, definitions and classifications for micro wealth statistics, and cover different phases in the statistical production process, including sources and methods for measuring particular forms of wealth, best practice in using household surveys or other sources to compile wealth statistics, the development of analytic measures, the dissemination of data, and data quality assurance.

For more information refer to the publication OECD Guidelines for Micro Statistics on Household Wealth (2013).

Historical Information

HISTORICAL INFORMATION

CHANGES FROM PREVIOUS SURVEYS

A number of changes have been made to the Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) since they were first conducted. The changes were designed to improve the quality of the surveys, however, these may have an impact on the assessment of trends and indicators over time. This section outlines the main changes over time, for each of the surveys.

The final sample sizes for SIH cycles (from 1994–95) and HES cycles (from 1984) are shown in Table 1 and Table 2. The sample sizes can give an indication of the reliability of the estimates produced from the surveys.

TABLE 1 HISTORICAL SIH SAMPLE SIZES

	CAPITAL CITY no.	BALANCE OF STATE(a) no.	TOTAL no.
1994-1995	4 438	2 381	6 819
1995-1996	4 588	2 375	6 963
1996-1997	4 715	2 530	7 245
1997-1998	4 649	2 376	7 025
1999-2000	4 327	2 310	6 637
2000-2001	4 397	2 389	6 786
2002-2003	6 657	3 554	10 211
2003-2004	7 077	4 284	11 361
2005-2006	6 405	3 556	9 961
2007-2008	6 258	3 087	9 345
2009-2010	11 324	6 747	18 071
2011-2012	8 048	6 521	14 569
2013-2014	(a) 8 059	(a) 6 103	14 162
2015-2016	(a) 11 206	(a) 6 562	17 768

(a) Estimates from 1994–95 to 2011–12 use the Australian Standard Geographical Classification (ASGC). Estimates from 2013–14 to 2015–16 use the Australian Statistical Geography Standard (ASGS) and are not directly comparable with estimates for previous cycles.

TABLE 2 HISTORICAL HES SAMPLE SIZES

	CAPITAL CITY no.	BALANCE OF STATE(b) no.	TOTAL no.
1984	6 896	2 675	9 571
1988-1989	5 263	2 142	7 405
1993-1994	6 107	2 282	8 389
1998-1999	4 795	2 098	6 893
2003-2004	4 907	2 050	6 957
2009-2010	7 906	1 868	9 774
2015-2016	7 987	2 059	10 046

(b) Estimates from 1984 to 2009–10 use the Australian Standard Geographical Classification (ASGC). Estimates from 2015–16 use the Australian Statistical Geography Standard (ASGS) and are not directly comparable with estimates for previous cycles.

To access information on the previous SIH and HES cycles listed, see the 'Past & Future Releases' tab of this publication.

FEATURES OF THE 2015–16 SIH AND HES COLLECTION

Changes in the 2015–16 SIH

The 2015–16 SIH content was largely similar to the 2013–14 SIH with some changes in questions, definitions and methodology. Key changes to the SIH in the 2015–16 cycle include:

- the item identifying carers which was added in 2013-14 was not collected in 2015-16;
- the processing of government payments information from the SIH and HES has been improved by the introduction of an eligibility-based model. Missing or anomalous government payments values are now produced by the model;
- the cyclical additional housing content first collected in 2007-08 and again in 2013-14 has been removed for 2015-16;
- there were changes to the methodology for imputed rent which are outlined further in the 'Imputed rent' chapter of this publication;
- an index of service accessibility has been added to the survey data. The Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA) enables analysis of expenditure in relation to accessibility of services for metropolitan areas; and
- questions collected on solar energy usage that were collected in the Household Energy Consumption Survey in 2012 were collected in the 2015-16 SIH.

Changes in the 2015–16 HES

The 2015-16 HES content was largely similar to the 2009–10 HES with some changes in questions, definitions and methodology. Key changes to the collection include:

- Australian Statistical Geography Standard (ASGS) 2011 has been used throughout the survey for sample selection, weighting and output. At the sub-state level, this required a break in the time series, with 2015–16 survey including Greater Capital City Statistical Area. HES 2009-10 used the Australian Standard Geographical Classification (ASGC);

- a small number of changes to some Household Expenditure Classification (HEC) categories, particularly to address emerging technologies and industries between the survey cycles. Estimates for previous cycles have been recompiled to reflect these changes at the broad expenditure level. See appendix 6 in the downloads tab of this publication for further details on the changes;
- screening procedures and the screening questionnaire used to identify the additional pensioner sample were revised to reduce the amount of screening required. Instead, one in four screened households completed the HES even where the screening outcome was negative, in order to collect information about the screening effectiveness, which was used to adjust weighting;
- the processing of government payments information from the SIH and HES has been improved by the introduction of an eligibility-based model. Missing or anomalous government payments values are now produced by the model;
- items on children's income previously collected in 2009-10 were not collected in 2015-16;
- an index of service accessibility has been added to the survey data. The Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA) enables analysis of expenditure in relation to accessibility of services for metropolitan areas; and
- questions collected on solar energy usage that were collected in the Household Energy Consumption Survey in 2012 were collected in the 2015-16 HES.

Changes to the survey sample for the SIH and HES

For the 2015-16 SIH and HES there was an additional sample of capital city households, targeting households whose main source of income was government pensions, benefits and/or allowances, this was last included in 2009-10 however changes were made to the screening and selection methodology for 2015-16. In this additional sample for 2015-16, dwellings were targeted using information from the previous HES (2009-10), and information from the Socio-Economic Indexes for Areas (SEIFA). Households were screened using a short questionnaire to identify whether pensions and benefits were likely to be the main source of income for the household. One in four households were selected to complete the combined SIH and HES questionnaire and diaries regardless of the screening outcome. Information from this sample were used to assess the outcomes from the screening questionnaire for the whole sub-sample. In 2015-16 the SIH and HES samples are not evenly balanced over the course of the year. Due to under-performance of the sample design in the first half of the collection year, a top-up sample was selected and collected from January - July 2016. Weights adjust by quarter to ensure representativeness across the year. For more information see the 'Sampling' chapter of this user guide.

Changes relating to specific data items

Hours usually worked in second job

In SIH and HES 2015-16, an isolated issue with the survey instrument occurred where respondents working more than one job were not asked to specify the hours they usually worked in their second jobs. As a result, data for hours usually worked in the second job had to be modelled. For further information please refer to the 'Data Collection and Processing' chapter of this publication.

Government pensions and allowances

The Newborn Supplement and Newborn Upfront Payment replaced the Baby Bonus on 1 March 2014 and those eligible receive it as part of their Family Tax Benefit (FTB) Part A payments for a period of 13 weeks or with their lump sum and are therefore not output separately.

The Seniors Supplement for Commonwealth Seniors Health Card (CSHC) holders was ceased and no longer paid beyond June 2015.

The microediting of income from government payments has been improved in terms of accuracy. The ABS has introduced an eligibility-based model designed by the Department of Social Services. This model produces a value for every person aged 15 years or over for all government payments and allowances that are collected in the survey. The modelled amount is then compared to the reported government payment values to identify and edit values that are significantly higher than the maximum amount eligible, to impute missing values and to impute values for payments which are consequential on the basis of reported payments (e.g. a value for Utilities Allowance is allocated to all recipients of Partner Allowance, even those who did not separately report it). All other government payments' values remain as reported. Some payment values are entirely modelled based on eligibility as in previous cycles of SIH. Microdata products (e.g. the Basic CURF) will include both the reported and modelled values for comparison (except where the reported payment values were out of the possible range or missing).

FEATURES OF THE 2013–14 SIH COLLECTION

Changes in the 2013–14 SIH

The 2013–14 SIH content was largely similar to the 2011–12 SIH with some changes in questions, definitions and

methodology. Key changes to the SIH in the 2013–14 cycle include:

- Australian Statistical Geography Standard (ASGS) 2011 has been used throughout the survey for sample selection, weighting and output. At the sub-state level, this required a break in the time series, with 2013–14 survey including Greater Capital City Statistical Area. Previous surveys used the Australian Standard Geographical Classification (ASGC);
- the expansion in the 2009–10 sample for an extra 4,200 households outside capital cities to support housing indicator reporting was maintained in the 2011–12 and 2013–14 cycles;
- this cycle of SIH includes extra housing information last collected in 2007–08;
- an item identifying carers has been added;
- a new model of imputed rent has been designed and implemented, which will be available in an additional release;
- data on the new Dad and Partner Pay subsidy has been collected;
- selected social transfers in kind variables have been modelled in 2013–14;
- a decrease in fully responding sample size from 14,569 households in 2011–12 to 14,162 households in 2013–14 due to increased sample loss and slightly lower response rates;
- additional information about lump sums drawn from superannuation;
- franking credits were previously partly modelled and added to disposable income. For 2013–14, franking credits were modelled for all income from dividends and added to gross income, and
- inclusion of questions on disability status, concession cards held, educational institution attended and private health expenditure that were last collected in the 2009–10 HES.

Changes to the survey sample

The 2013–14 SIH sample design is similar to previous cycles of SIH with three main changes:

- Australian Statistical Geography Standard (ASGS) 2011 has been used for sample selection;
- the introduction of a new master sample for all ABS Special Social Surveys; and
- change to the cluster fractions in each state by Part of State.

Integration of Income and Wealth publications

From 2013–14, the publication Household Income and Wealth, Australia, 2013–14 (cat. no. 6523.0) incorporates information previously presented as part of the Household Income and Income Distribution, Australia (cat. no. 6523.0) and Household Wealth and Wealth Distribution, Australia (cat. no. 6554.0) products. The publication presents key information about household income and wealth from the 2013–14 SIH. The primary benefit of integrating the Income and Wealth publications is to allow for income and wealth to be considered together when analysing household economic resources. This approach enables more accurate representation of household economic wellbeing.

Changes relating to specific data items

Geography

In 2011 the Australian Statistical Geography Standard (ASGS) was published to replace the former geography framework, the Australian Standard Geographical Classification (ASGC). The 2013–14 SIH data is presented on the current ASGS. Data from prior cycles uses the ASGC classification.

For further information on ASGS refer to the publication Australian Statistical Geography Standard (ASGS): Volume 1 – Main Structure and Greater Capital City Statistical Areas, July 2011 (cat. no. 1270.0.55.001) and <https://www.abs.gov.au/geography>.

Government pensions and allowances

Lump sum Government payments included in SIH 2013–14 are the Dad and Partner Pay, the Clean Energy Supplement (CES) and the School Kids Bonus.

Dad and Partner Pay is a new entitlement under the Paid Parental Leave Scheme paid directly to a working dad or partner who cares for a child born or adopted from 1 January 2013. Dad and Partner Pay gives you up to two weeks of government-funded pay at the rate of the National Minimum Wage. The Dad and Partner Pay can be taken all at once at any time in the first year after birth or adoption.

The Clean Energy Supplement (CES) replaced the Clean Energy Advance (CEA) from March 2013 and was captured for the 2013–14 SIH. The Clean Energy Supplement provided an increase on the standard Age Pension rate and was paid in addition to existing Pension Supplements.

The Schoolkids Bonus replaced the Education Tax Refund from January 2013 and was captured for the 2013–14

SIH. School Kids Bonus is made payable to families receiving Family Tax Benefit Part A, young people in school receiving Youth Allowance and some other income support and veterans payments who met age and education requirements.

Tax payable/Dividends

The collection of dividends was changed for this cycle. In previous cycles, respondents were asked to report their dividend income including the franking credit. In 2013-14, dividend income for publicly listed shares was collected excluding franking credits. These were imputed and added to total dividend income using the most recent ATO data on the proportion of franked and unfranked dividends. Previously an adjustment for the under-reporting of franking credits was applied to the income tax model so that while gross income from dividends was understated, disposable income was not affected.

FEATURES OF THE 2011–12 SIH COLLECTION

Changes in the 2011–12 SIH

The 2011–12 SIH content was largely similar to the 2009–10 SIH with some changes in questions, definitions and methodology. Key changes to the 2011–12 SIH include:

- a decrease in fully responding sample size from 18,071 households in 2009–10 to 14,569 households in 2011–12. The expansion in the 2009–10 sample for an extra 4,200 households outside capital cities to support housing indicator reporting was maintained. The additional sample of metropolitan households whose main source of income was a government pension, benefit and/or allowance included in the 2009–10 SIH and HES samples to improve analysis for the Pensioner and Beneficiary Living Cost Index was not maintained;
- an additional benchmark for the value of government benefit cash transfers used in 2009–10 was not required in 2011–12;
- disability questions for persons aged 15 years and over were not asked in 2011–12, but will be collected in 2013–14;
- Child Care Rebate (CCR) and Child Care Benefit (CCB) have been modelled to improve estimates of both the payment amounts and the number of households receiving assistance;
- the value of offset accounts was collected separately for the first time;
- selected social transfers in kind variables have been modelled in 2011–12, and analysis included in the publication Household Income and Income Distribution, Australia, 2011-12 (cat. no. 6523.0); and
- a feature article on Low Economic Resource households is included in the publication Household Income and Income Distribution, Australia, 2011-12 (cat. no. 6523.0).

Changes to the survey sample

The expansion in the 2009–10 sample for an extra 4,200 households was maintained in the 2011–12 SIH. This additional sample of households outside capital cities better supports Council of Australian Governments (COAG) performance indicator reporting, particularly in regard to housing affordability and home ownership measures required under COAG intergovernmental agreements.

The additional sample of metropolitan households whose main source of income was a government pension, benefit and/or allowance included in the 2009–10 SIH and HES samples has not been maintained in the 2011–12 sample. The main purpose of this additional sample was to support improved analysis for the Pensioner and Beneficiary Living Cost Index (PBLCI).

Changes to Government pensions and allowances

Paid Parental Leave was introduced on 1 January 2011 as an alternative to the Baby Bonus. Under the Paid Parental Leave scheme, eligible working parents can get government funded pay when they take time off from work to care for a newborn or recently adopted child. The income test for PPL requires that the parent or parents earn no more than \$150,000 in the year previous to the child's birth. People who meet the eligibility requirements must decide which payment, paid parental leave or Baby Bonus, is best suited to them, as both payments cannot be received for the same child.

One off Government payments included in SIH 2011–12 are the Clean Energy Advance and the one-off Education tax refund.

The Clean Energy Advance payment is a tax-exempt lump sum payment, paid in May and June 2012 to help low and middle income households meet the impacts of carbon pricing on living expenses for up to 12 months. This is a one-off payment paid to pensioners, other income support recipients, families receiving Family Tax Benefit payments and Seniors Supplement recipients, provided they met eligibility requirements.

One-off Education Tax Refund payments were paid in June 2012 as part of the transition to the new Schoolkids

Bonus and in place of the Education Tax Refund for the 2011–12 financial year. The one-off payment was made payable to families receiving Family Tax Benefit Part A, plus young people in school receiving Youth Allowance and some other income support and veterans payments, providing they met age and education requirements. The Schoolkids Bonus replaces the Education Tax Refund from January 2013.

Other changes

Errors in processing the 2009–10 income data have been corrected, resulting in an average decrease of \$1 for mean equivalised disposable household income across all households. This was reflected largely in a decrease of 0.04% in the mean equivalised disposable household income of households in the second and third deciles. The income estimates for 2009–10 shown in this publication have been revised. The second edition of the 2009–10 CURF includes the revised estimates.

FEATURES OF THE 2009–10 SIH AND HES COLLECTION

Changes in the 2009–10 SIH

The 2009–10 SIH content was largely similar to the 2007–08 SIH with some changes in questions, definitions and methodology. Key changes to the collection include:

- an increase in the sample size from 9,345 households in 2007–08 to 18,071 households in 2009–10 due to a 10,800 base sample, an expansion in the SIH sample for an extra 4,200 households, located outside capital cities as well as an additional sample of metropolitan households whose main source of income was a government pension, benefit and/or allowance;
- the inclusion of a benchmark for the value of government benefit cash transfers to ensure that the survey estimate of government benefit cash transfers is maintained at a proportion of aggregate benefit cash transfers that is consistent with previous SIH cycles (this benchmark was last used in the 2000–01 SIH);
- housing data on dwelling condition, characteristics, mobility, finance and rental arrangements collected in 2007–08 were not collected in 2009–10;
- wealth data items on assets and liabilities were collected in 2009–10 (last collected in 2005–06 SIH); and
- disability questions were asked for persons aged 15 years and over in the 2009–10 SIH.
- improvements, aligning with international statistical standards, to the collection of income statistics including to:
 - incorporate non-cash benefits provided to employees;
 - incorporate termination payments and lump sum workers' compensation payments; and
 - improve the coverage of bonuses and irregular overtime payments and inter-household transfers. For more information see Appendix 4 of Household Income and Income Distribution, Australia, 2007–08 (cat. no. 6523.0).
- improvements to the collection of the value of assets in public unit trusts and private trusts.

Changes in the 2009–10 HES

The 2009–10 HES content was largely similar to the 2003–04 HES with some changes in questions, definitions and methodology. Key changes to the collection include:

- an increase in the sample size from 6,957 households in 2003–04 to 9,774 households in 2009–10 due to the inclusion of an additional sample of metropolitan households whose main source of income was a government pension, benefit and/or allowance
- improvements, aligning with international statistical standards to the collection of income statistics
- the incorporation of non-cash benefits used by employees to improve the coverage of consumption expenditure and to ensure consistency with the conceptual treatment of income
- a small number of changes to some Household Expenditure Classification (HEC) categories, particularly to address emerging technologies between the survey cycles. For details see Appendix 6 of the Household Expenditure Survey and Survey of Income and Housing, User Guide, Australia, 2009–10 User Guide (cat. no. 6503.0)
- disability questions for persons aged 15 and over were asked in the 2009–10 HES (last collected in HES in 1998–99)
- the inclusion of expenditure classified by the Classification of Individual Consumption According to Purpose (COICOP) for the first time.

Changes to the survey sample for the SIH and HES

The May 2009 Budget funded an expansion in the SIH sample for an extra 4,200 households, primarily located outside capital cities. This expansion was to better support Council of Australian Governments (COAG) performance indicator reporting, particularly in regard to housing affordability and home ownership measures

required under COAG intergovernmental agreements.

For the 2009–10 SIH and HES there was also an additional sample of metropolitan households whose main source of income was a government pension, benefit and/or allowance. These pensioner sample households were enumerated using a separate sample design, but the fully responding in scope households from this sample were included in the final SIH samples.

Changes relating to specific data items

In addition to the changes already listed for 2009–10, there were also a number of changes that related to specific data items.

Income measures

In 2007–08, the ABS revised its standards for household income statistics following the adoption of new international standards in 2004 and review of aspects of the collection and dissemination of income data. The 2007–08 and 2009–10 income estimates for the SIH and the HES apply the new income standards. Information about ABS' improved household income measures, is available in Part 4.2 'Changes in the 2007–08 SIH'. As these standards have now been implemented for more than the 2007–08 cycle in which they were introduced, current income items have had some label changes.

- In 2007–08, they were labelled as '2007–08 basis' items to be clearly identified from '2005–06 basis' and earlier items used prior to the introduction of the new standards. From 2009–10, all income items using the current income standard now have no qualifier in the label, as they no longer apply to a specific survey cycle. For example, the item 'Total current weekly income from all sources (2007–08 basis)' is now 'Total current weekly income from all sources'.
- Income items about the 'Principal source of income' are now labelled 'Main source of income', consistent with the new standards.

Other Changes

There have been changes to some pensions and allowances paid by the government, resulting in both the deletion of items and the addition of new items. This is consistent with previous cycles, where changes to government pensions and allowances made since the last survey cycle are implemented. In the 2009–10 SIH, particular changes in government pensions and allowances resulted in new modelled items and changes in populations. The introduction of the Pension Supplement and the Seniors Supplement on 20 September 2009 was a significant change, and occurred while the 2009–10 SIH was in the field. As a result, the Pension Supplement and Seniors Supplement were modelled from data collected from respondents based on their reported payments and eligibility. The Utilities Allowance now forms part of these supplements for some recipients, but is still paid separately to recipients of some pension and allowance recipients. As a result, comparisons with data from 2007–08 and earlier are not possible for affected items, as eligible populations have changed in addition to payment types.

Errors in processing the 2007–08 income estimates have been corrected, resulting in an average increase of \$3 for mean equivalised disposable household income across all households. This was reflected largely in a 1.3% increase in the mean equivalised disposable household income of households in the highest quintile. The income estimates for 2007–08 shown in this publication have been revised.

FEATURES OF THE 2007–08 SIH COLLECTION

Changes in the 2007–08 SIH

The 2007–08 SIH was largely similar to the 2005–06 SIH, but there were some changes in topics, definitions and methodology.

Changes impacting all data items

The main changes that could impact on all data items were:

- the final sample size of the SIH, which decreased from 9,961 in 2005–06 to 9,345 in 2007–08;
- benchmarks based on the 2006 Census were used for the 2007–08 SIH; in 2005–06 benchmarks were based on the 2001 Census;
- more detailed age benchmarks were used when determining the weights to be allocated to each unit in 2007–08 estimates; and
- the imputation procedures were changed: in 2007–08, as in 2003–04, all households where one or more people did not respond were imputed if the non-responding person was not a 'significant' person; in 2005–06, all households where one or more people did not respond were treated as non-responding.

Changes relating to specific data items

There were also a number of changes that related to specific data items.

Improvements to income measures

The ABS undertook a major review of its income standards, to ensure that its standards and practices appropriately reflected new international standards for household income statistics (promulgated in 2004) and suitably addressed a range of outstanding methodological and collection issues. The 2007–08 SIH income estimates were the first to apply the changes.

The income measures used in the 2007–08 SIH included changes to employment income, investment income, lump sum payments and financial support. Specific changes in the income measures used in the 2007–08 survey were:

- Employment income included all payments received by individuals as a result of their current or former involvement in paid employment. In addition to the regular and recurring cash receipts previously included, the new income measures also included non-cash benefits, bonuses, termination payments and payments for irregular overtime.
- Interest paid on money borrowed to purchase shares or units in trusts was netted off income earned from these sources when deriving income estimates.
- Income earned as a silent partner in a partnership and some private trust income was classified to investment income rather than unincorporated business income. This change did not affect trust income resulting from the recipient working in their own business, which continued to be classified as unincorporated business income. The questions developed to effect this change also improved the reporting of income from these sources.
- Lump sum workers' compensation receipts were included.
- A wider range of data on financial support received from family members resident outside the household was included. In addition to regular payments previously collected, financial support was extended to include other forms of financial support, including goods and services received which were purchased by others, e.g. rent, education, food, clothing, car registration and utilities. Capital transfers, such as the purchase of property or cars, were excluded.

Some limits were placed on the new inclusions where the magnitude of the individual amounts received exceed that likely to be used to support current consumption, e.g. termination payments and workers' compensation payments. For more information see 'Appendix 4 Improvements to income statistics' of the publication Information Paper: Survey of Income and Housing, User Guide, Australia, 2007–08 (cat. no. 6553.0) for more information on the changes to income measures.

Inclusion of child care data

There were additional questions on the use of child care, including preschool for a selected child, covering: type; time used; costs; and Child Care Benefit (CCB) received. In addition there were new data items on barriers to labour force participation due to child care related reasons. For more information see 'Part 1 Concepts and definitions' of the publication Information Paper: Survey of Income and Housing, User Guide, Australia, 2007–08 (cat. no. 6553.0).

Inclusion of additional housing data

The 2007–08 SIH included additional housing topics to enable reporting on the broader housing circumstances of non-Indigenous Australians. The ABS will collect additional information on housing in the SIH every six years. For the 2007–08 SIH, housing topics included housing mobility, housing condition and dwelling characteristics, home purchase for first home buyers, household finances of owners with a mortgage, rental arrangements and the affairs of renters, and neighbourhood. For more information see 'Appendix 6 Additional housing topics, 2007–08' of the publication Information Paper: Survey of Income and Housing, User Guide, Australia, 2007–08 (cat. no. 6553.0).

Inclusion of data on ethnicity

There were additional questions relating to country of birth of each parent, first language spoken, main language spoken at home, and proficiency in spoken English.

Changes to financial support received from or provided to family members not in the household

In the 2007–08 SIH, a wider range of data on financial support received from and paid to family members resident outside the household was collected. Previously these were mainly limited to regular payments for spousal maintenance and child support. In 2007–08, respondents were asked to include other forms of financial support, including goods and services received which were purchased by others, e.g. rent, education, food, clothing, car registration and utilities. Capital transfers, such as for the purchase of property or cars, were excluded.

Inclusion of data on tenure type for income units and persons

The 2007–08 SIH collected information on the tenure and landlord type for income units and persons. New data items were included at the person level relating to tenure, landlord type and weekly rent payments. New data items were also included at the income unit level relating to tenure and landlord type. The information was previously available from the 2002–03 SIH.

Improvement in selection of household reference person

Improvements were made in the way the household reference person was identified in the 2007–08 SIH. In the 2005–06 SIH, the household reference person was identified by applying selection criteria about relationships, income and age. However, this method did not always identify the correct reference person, particularly for some group households (where one person may be the owner and other unrelated individuals are also living in the dwelling) or first home buyers (where the first home buyer may not be selected as the household reference person based simply on relationship income and age). In the 2007–08 SIH, tenure was added as a criterion in determining the household reference person. For more detailed information about the selection criteria used to identify the household reference person see the 'Glossary' section of this publication.

Commonwealth Rent Assistance (CRA)

New data items were included at the income unit and person levels relating to the receipt of CRA and the amount received. CRA is a non-taxable income supplement paid through Centrelink to individuals and families who rent in the private rental market. It is only paid to recipients of another government benefit or pension, and is paid in conjunction with that other payment. Reported amounts of CRA were added to the relevant reported benefit or pension during processing where it was identified that the amount had not been included.

Loans level data

The 2005–06 SIH CURFs contained housing cost data items at the household level relating to the amounts owing on mortgages and unsecured loans for housing and other purposes. The 2007–08 SIH CURFs also contained those data items, but also included a new loans level that contained data items relating to each reported loan belonging to a household.

Other changes

Some changes were implemented within the derivation process to correct errors detected when calculating the disposable income for some households in receipt of tax offsets. Estimates for the 2005–06 SIH were updated and reflected in the 2007–08 publication.

FEATURES OF THE 2005–06 SIH COLLECTION

Changes in the 2005–06 SIH

The 2005–06 SIH was largely similar to the 2003–04 SIH, but there were some changes in topics, definitions and methodology.

The main changes that could impact on all data items were:

- the 2003–04 SIH was integrated with the HES whereas the 2005–06 survey was run as a stand-alone survey;
- the final sample size decreased from 11,361 household in 2003–04 to 9,961 in 2005–06;
- the scope of the survey was changed slightly. In the 2003–04 SIH, all people living in Indigenous communities were out of scope; in the 2005–06 SIH they were out of scope only if they were living in Very Remote areas;
- the benchmarks used were based on the 2001 Census, and these benchmarks were consistent with the scope of the survey in that people living in Very Remote areas in all states and territories were excluded. In the 2003–04 SIH, the benchmarks used were based on the 1996 Census and did not exclude people living in Very Remote areas, except in the Northern Territory where people living in areas defined as sparse were excluded;
- more detailed age benchmarks were used when determining the weights to be allocated to each unit in the 2005–06 SIH estimates; and
- imputation procedures were changed - all households where one or more people did not respond were treated as non-responding; in the 2003–04 SIH these were imputed if the non-responding person was not a 'significant' person.

Changes relating to specific data items

There were also a number of changes that related to specific data items.

Inclusion of all salary sacrificed income

In the published output from the 2005–06 SIH, all amounts salary sacrificed were included in wages and salary estimates. In output from previous surveys, estimates included only some salary sacrificed amounts. The 2003–04 SIH estimates published in the 2005–06 issue of Household Income and Income Distribution, Australia, 2005–06 (cat. no. 6523.0) were revised to include additional salary sacrificed amounts. The changed treatment of salary sacrifice did not impact significantly on the estimates. In the 2005–06 SIH the Gini coefficient calculated on the new basis was 0.307, compared with 0.304 when compiled on the former basis. Including all salary sacrifice in the income estimates for the 2005–06 SIH added 0.003 points to the Gini coefficient and \$5 (0.8%) to mean weekly equivalised disposable household income.

Improvements to Family Tax Benefit (FTB) estimates

Improvements were made to estimates relating to current income from the FTB. Prior to the 2005–06 SIH, the FTB item only included FTB received as fortnightly payments. FTB paid through the tax system or as a lump sum was excluded for practical reasons. The items 'Total current weekly income from government pensions and allowances' and 'Total income from all sources' also excluded these components, but they were included in measures of disposable income. In the 2005–06 SIH the new FTB item 'Current weekly income from family tax benefits (modelled)' included all FTB payments, regardless of whether they were received fortnightly, via the tax system or as a lump sum. It also included payments of FTB supplement. Some components of the FTB item used in the 2005–06 SIH were modelled using information on income and household demographics reported in the survey. All income aggregates included the new item. It should be noted that there was little impact on comparability of estimates of disposable income as a result of the change, since disposable income has always included modelled components relating to FTB paid through the tax system or as a lump sum.

Housing costs definition

The housing costs measure used in the 2005–06 issue of Housing Occupancy and Costs, Australia, 2005–06 (cat. no. 4130.0.55.001) was slightly different from the measure used in prior issues. In prior issues housing costs comprised: rates payments for owners; rates and housing loan payments for owners with a mortgage; and rent payments for renters. In 2005–06, information on housing costs for other tenure types, which was first collected in the 2003–04 survey, was included. The definition of housing costs was no longer dependent on tenure: it was defined as the sum of rent payments; rates payments; and mortgage or unsecured loan payments if the initial purpose was primarily to buy, add to, or alter the dwelling. The revised definition added only about \$1 (less than 1%) to mean weekly housing costs.

Other changes

There were changes to some pensions and allowances paid by the government, resulting in new items for maternity payment, utilities allowance, seniors concession allowance and one-off payments to older Australians. A number of changes were made to the derivation process used to estimate income tax liability. In prior surveys estimates of imputed tax payable included an adjustment to subtract estimated FTB payments made through the tax system or as a lump sum. This ensured that FTB payments made through the tax system or as a lump sum were included in disposable income. This adjustment was no longer required since such payments were included in the gross income estimates in 2005–06.

FEATURES OF THE 2003–04 SIH AND HES COLLECTION

Integration of HES and SIH

The 2003–04 SIH was integrated with the 2003–04 HES. This integration was achieved by selecting a subsample of the households in the SIH survey and asking them the additional questions required for HES purposes. The HES subsample comprised 6,957 of the 11,361 households responding to the SIH. The main advantages of integrating the surveys were:

- respondent burden is lower;
- the data collection costs are lower; and
- the resultant dataset is a richer suite of data because HES and SIH results are more comparable than data obtained prior to 2003–04.

However, in order to achieve this integration, some changes were required to both surveys which impact on comparability with previous surveys.

In addition, it is possible that the integration of the surveys affected the non-response bias in the SIH. The response rates for the HES subsample are lower than achieved in the SIH-only sample component because of the reluctance of some respondents to provide the extra information required in the HES part of the survey. The non respondents to the 2003–04 survey may therefore have different characteristics to the non respondents of previous SIHs, resulting in different non-response bias.

Data items removed

A few data items collected in previous surveys were not collected in the 2003–04 SIH. These include:

- income unit level tenure - in 2003–04 tenure was available at the household level only;
- labour force status in each of the 7 months prior to the interview;
- full-time/part-time status in each of the 7 months prior to the interview; and
- month left school.

Changes in concepts, definitions and classifications

In previous SIHs, the household reference person was chosen from an income unit within the household that had the highest tenure type. Tenure type was collected for households but not for income units in the 2003–04 SIH. The tenure type of income units was therefore not used in determining which person in the household is to be designated as household reference person.

In the published output from the surveys, the data item "family composition of household" replaced the item "household composition". The new item better met user requirements for the treatment of households with dependent children.

Changes to survey methodology

There were a number of changes to the survey methodology introduced in 2003–04. Some of these were a consequence of the integration of the SIH and HES.

The main changes which could impact on all data items were:

- previous SIH cycles had selected dwellings from those that had been respondents for eight months in the Monthly Population Survey (MPS), whereas in 2003–04 the SIH sample was drawn from dwellings not recently included in an ABS household survey (possible change in response bias);
- the sample size of the SIH was increased from 10,211 households (comprising 19,400 persons aged 15 and over) in 2002–03 to 11,361 households (comprising 22,315 persons aged 15 and over) in 2003–04 (lower sample error);
- interviewer use of a laptop computer (this may have improved data capture); and
- editing and imputation procedures were changed - in particular because the SIH sample was no longer drawn from households who had participated in the MPS, responses given in the MPS were no longer available as a basis for imputation.

Changes to specific data items

The changes in survey methodology relating to specific data items were:

- current income from own unincorporated business and investments was measured using respondents' estimates of expected income in the current financial year, whereas previously these data items were estimated based only on information about reported income for the previous financial year - this change had a significant impact on the coverage of such income streams in current income measures;
- the collection of details about the assets and liabilities of the household may have improved the quality of reporting of associated income streams;
- the instrument wording was changed to explicitly ask that reported dividends include the value of imputation credits - previously this direction was only included in interviewer instructions;
- information relating to some household loans was collected using a different methodology - for those loan accounts that have a redraw facility and have regular income (such as wages) deposited into them, respondents were not asked to provide a 'usual repayment' - instead they were asked to provide the amount that the principal outstanding usually decreases by, in a 6 month period, and this was used in conjunction with information collected on interest to derive a repayment amount;
- details of previous financial year income were collected from all persons - in previous SIHs this information was not collected from people who had only arrived in Australia in the current financial year;
- details of hours worked were collected from all employed persons - in previous SIHs, this information was only available for employees; and
- unlike previous SIHs, data on repayments and principal outstanding on mortgages for other purposes (i.e. for purposes other than building, buying, altering or adding to the selected dwelling) excludes mortgages that were used for business or investment purposes.

FEATURES OF EARLIER COLLECTIONS

Changes in earlier surveys

The SIH cycles from 1994–95 to 2002–03 are comparable. These files were reprocessed in 2003 to apply consistent demographic benchmarks to all years and to incorporate the latest demographic estimates in the benchmarks. Changes over this period are generally minor and are summarised below:

- the sample size was fairly constant at about 7,000 households from 1994–95 to 2000–01, but increased to 10,211 in 2002–03;
- an extra benchmark was used in the weighting process in 1999–2000 and 2000–01 to compensate for an apparent fall in the coverage of government benefit payments in those years;
- any changes to government pensions and allowances were incorporated; and
- the introduction of new standards, (e.g. the introduction of the Australian Standard Classification of Occupations (ASCO), Second Edition, 1997 (cat. no. 1220.0) in the 1996–97 SIH).

In addition, the item, 'Nature of occupancy' was replaced by 'Tenure type' from 1995–96. Prior to 1995–96 owner occupiers were classified as either owners or purchasers. A purchaser had a mortgage or loan secured against the dwelling, and the loan was used to purchase or build the dwelling. An owner had no loan secured against the dwelling for the purpose of building or purchasing. From 1995–96, owner occupiers were classified as owners without a mortgage and owners with a mortgage. This change to the classification was made to reflect the increasing diversity in financial instruments, in particular the increasing use of loans secured against dwellings being used for non-housing purposes. Such secured loans have implications for the security of tenure and a household with such a loan is classified as an owner with a mortgage in the new classification.

Previous surveys of household income were conducted by the Australian Bureau of Statistics (ABS) in 1979, 1982, 1986 and 1990. These surveys were generally conducted over a two-month period, compared to a twelve-month period for the SIH. The SIH also included improvements to the survey weighting and estimation procedures, changes to the scope and coverage of household income and changes to interviewing methods.

Previous Household Expenditure Surveys were conducted by the Australian Bureau of Statistics (ABS) in 1974-75, 1975-76, 1984, 1988-89, 1993-94, 1998-99, however, current results are only comparable back to 1984 when the Household Expenditure classification (HEC) was first introduced.

Using the survey

USING THE SURVEY

LEVELS AND ITEMS

Units used in Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) published output

Analysis of income data is usually carried out using household income measures. As explained in the 'Income' section of this publication, it is usually most appropriate to examine household income when considering economic wellbeing because of the sharing that occurs between members of households. The 'Income' section of this publication also explains that income comparisons are improved if the household income measure is adjusted to reflect the size and composition of the household.

However, when analysing the income distribution, it is the number of people who belong to households with particular characteristics, rather than the number of households with those characteristics, that is of primary interest. This leads to the preference for the equal representation of those persons in such analysis. For example, if the person is used as the unit of analysis rather than the household, then the representation in the income distribution of each person in a household comprising four persons is the same as that for each person in a household comprising two persons. In contrast, if the household were to be used as the unit of analysis, each person in the four person household would only have half the representation of each person in the two person household.

Therefore, the income distribution measures from the SIH are calculated with respect to persons, including children. Such measures are sometimes known as person weighted estimates because the unit of analysis is the person, even though all the characteristics being described are characteristics of the household to which the person belongs. The method of calculation is described in the 'Summary indicators of Income Distribution' section of this publication.

Whereas, estimates of net worth and expenditure are published using the household as the basic unit of analysis. The data item list, available from the 'Downloads' tab of this publication in late 2017, will show which data items are available for each unit type supported by the SIH and HES.

Households

A household consists of one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling. The persons in a household may or may not be related. They must live wholly within one dwelling. A group of people who make common provision for food and other essentials of living but live in two separate dwellings are in two separate households.

Most of the published output from the SIH and HES uses the household as the unit of analysis and relates to household characteristics.

Income units

An income unit is one person, or a group of related persons within a household, whose command over income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples, and between parents and dependent children. The income unit is similar, but not identical, to the unit used in determining the eligibility of people for many government pensions and allowances such as Centrelink payments.

Income data and selected income unit characteristics are available on an income unit basis from the SIH and HES, although they are not included in any published tables from the surveys.

Persons

Data at the person level are available for each person aged 15 years and over usually resident in the households included in the SIH and HES. Data relating to characteristics of children aged under the age of 15 years are only available at the household level.

Loans

A household may have one or more loans, and data are available for the characteristics of each loan. These characteristics include the main purpose of the loan, its security, the amount borrowed, and the principal outstanding and weekly repayment, although they are not included in detail in any published tables from the surveys.

REFERENCE PERSON

In some analyses, it is useful to describe a household or income unit using characteristics that are attributes of persons. For example, the analyst may wish to classify households into 'older households' and 'younger households'. One approach used is to designate one member of the household or income unit as the reference person and assume that the characteristics of that person are descriptive of the household or income unit more generally. The reference person is chosen through a set of operating procedures designed to identify the person most likely to be representative of the household or income unit. Households or income units can then be classified according to the age of the reference person, occupation of the reference person, country of birth of the reference person, etc.

Household reference person

The reference person for each household is chosen by applying a selection criteria, to all household members aged 15 years and over. The selection criteria below is applied in the order listed, until a single appropriate reference person is identified:

- the person with the highest tenure when ranked as follows: owner without a mortgage, owner with a mortgage, renter, other tenure
- one of the partners in a registered or de facto marriage, with dependent children
- one of the partners in a registered or de facto marriage, without dependent children
- a lone parent with dependent children
- the person with the highest income
- the eldest person.

For example, in a household containing a lone parent (owner with a mortgage) with a non-dependent child, the one with the higher tenure - i.e. the lone parent - will become the reference person. However, if both individuals have the same tenure (e.g. a couple, owners with a mortgage), the one with the highest income will become the reference person.

Income unit reference person

The reference person for an income unit is the male partner in a couple income unit, the parent in a lone-parent income unit and the person in a one-person income unit.

CONFIDENTIALITY

The Census and Statistics Act, 1905 provides the authority for the ABS to collect statistical information, and requires that statistical output shall not be published or disseminated in a manner that is likely to enable the identification of a particular person or organisation. This requirement means that the ABS must take care and make assurances that any statistical information about individual respondents cannot be derived from published data.

Some techniques used to guard against identification or disclosures of confidential information in statistical tables are suppression of sensitive cells, random adjustments to cells with very small values, and aggregation of data.

To protect the confidentiality of individuals, a technique called perturbation is used to randomly adjust cell values in the SIH and HES published outputs. Perturbation involves small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics.

After perturbation, a given published cell value will generally be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals.

The introduction of perturbation in publications ensures that these statistics are consistent with statistics released via services such as Table Builder. To protect confidentiality within SIH and HES publications, some cell values may have been suppressed and are not available for publication but included in totals where applicable.

Future customised data requests from the 2015-16 SIH and HES will also utilise the same technique

DATA ITEM LIST

For details of the data items available from the 2015-16 SIH and HES see the Excel spreadsheet available as a data cube from the 'Downloads' tab of this publication. This will be released later in 2017 when the SIH and HES microdata is released.

PUBLICATIONS

User Guide

This publication describes the definitions, concepts, methodology and estimation procedures used in the 2015-16 SIH and HES. Additional material available as part of this publication includes the questionnaires, interviewer prompt cards and a list of SIH and HES output data items and classifications are available from the 'Downloads' tab of this publication.

Income and Wealth

Household Income and Wealth, Australia, 2015–16 (cat. no. 6523.0) presents key information about household income and wealth from the 2015-16 SIH. It incorporates information previously presented as part of the Household Income and Income Distribution, Australia (cat. no. 6523.0) and Household Wealth and Wealth Distribution, Australia (cat. no. 6554.0) products. It includes estimates of household income and wealth, classified by various characteristics of the households and their residents such as income quintile, main source of household income, family composition, tenure type, age and employment status. It also includes summary child care usage and cost information.

Expenditure

Household Expenditure Survey 2015–16, Summary of Results (cat. no. 6530.0) provides estimates of household expenditure patterns and composition across the population. Various other characteristics of households and residents (e.g. income levels and sources, employment, family makeup, age and geographic location) give these key indicators a rich context to help understand the living standards and economic wellbeing of Australians.

Housing

Housing Occupancy and Costs, Australia (cat. no. 4130.0) presents data from the 2015-16 SIH on Australian housing occupancy and costs, and it relates these to characteristics of occupants and dwellings such as tenure, family composition of household, dwelling structure, age, income and main source of income. It also includes the value of dwelling estimates and information on recent home buyers.

Fiscal Incidence Study (FIS)

The Fiscal Incidence Study (FIS) shows the effects of government benefits and taxes on the distribution of income among private households in Australia. Data from the FIS will be available in Government Benefits, Taxes and Household Income, Australia, 2015-16 (cat. no. 6537.0) expected to be released in early 2018.

Imputed Rent

The new methodologies for imputed rent estimates used for 2015-16 will be explained in Estimates of Imputed Rent, Australia, 2015-16 (cat. no. 6525.0) which is expected to be released in late 2017. The availability of imputed rent estimates allows the analysis of household income to be extended to include the imputed rental incomes that flow to people living in homes owned by the occupant and those paying subsidised rent. Such imputations allow for more meaningful comparison of the income circumstances of people living in different tenure types, and to understand changes over time in income levels and the distribution of income when tenures may also be changing over time.

DATA CUBES

All the data cubes from the 2015-16 SIH and HES will be available from the 'Downloads' tab of the publications listed above.

If the information you require is not available from the publication or the data cubes, please contact the National Information and Referral Service (NIRS) on 1300 135 070, (international callers +61 2 9268 4909) or via email <client.services@abs.gov.au>. The NIRS can be contacted from anywhere in Australia between 8:30am and 5:00pm (AEST) Monday to Friday.

SUPPORTING MATERIAL

Supporting material is available to assist data users in analysing the data from the survey. A representation of the computer assisted interview questionnaire, and prompt cards used in the SIH and HES is available on the ABS website. These are available from the 'Downloads' tab of this publication.

MICRODATA ACCESS

For clients wanting to produce their own tabulations and conduct manipulations of survey estimates, microdata is accessible through a variety of products. To protect the confidentiality of individual persons and households some data items are removed from the file and the level of detail for some items is reduced. Microdata access includes:

- Confidentialised Unit Record File (CURF) - a downloadable package of files containing unit records relating to almost all the survey respondents
- DataLab - approved users can access for in-depth analysis with a broad range of variables and unit record detail using a range of statistical software packages
- TableBuilder - an online tool for creating tables and graphs based on a broad range of variables and detail

CURFs for the SIH and HES will be accessible via the publication Microdata: Household Expenditure, Income and Housing, Australia, 2015-16 (cat. no. 6540.0) from 24 October 2017. Additional microdata products will be released in stages through to early 2018, including DataLab, TableBuilder, and a later edition of the CURF including Fiscal Incidence Study items.

For more information see the Microdata Entry Page on the ABS website.

SPECIAL DATA SERVICES

The published data are only a small portion of the data collected in the surveys. The ABS offers specialised consultancy services to assist data users with more complex statistical information needs. Users may wish to have the unit record data analysed according to their own needs, or require tailored tables incorporating data items and populations as requested by them. A wide range of data items are available - the detailed list of these will be available from the 'Downloads' tab of this publication later in 2017.

Tables and other analytic outputs can be made available electronically or in printed form. However, as the level of detail or disaggregation increases with detailed requests, the number of contributors to data cells decreases. This may result in some requested information not being able to be released due to confidentiality or sampling variability constraints. All specialist consultancy services attract a service charge and clients will be provided with a quote before information is supplied. If you have any questions or require any more information, please contact the NIRS on 1300 135 070, (international callers +61 2 9268 4909) or via email <client.services@abs.gov.au>.

Comparison with Australian Systems of National Accounts (ASNA)

COMPARISON WITH AUSTRALIAN SYSTEM OF NATIONAL ACCOUNTS (ASNA)

INTRODUCTION

The Survey of Income and Housing (SIH) and the Household Expenditure Survey (HES) provide detailed estimates of household income, wealth and expenditure collected from individual households. These estimates are used to analyse the distribution of economic resources and expenditure across the population, and to compare the financial resources available to various population subgroups. These analyses support the development, implementation and evaluation of social and economic policies, particularly for potentially disadvantaged groups such as pensioners, one-parent families and the unemployed. The HES estimates of expenditure are also used to determine the 'basket of goods' that helps compile the Consumer Price Index (CPI) as well as the relative importance of each expenditure class in calculating the index.

The Australian System of National Accounts (ASNA) also provides estimates of income, wealth and expenditure for the household sector as a whole. The ASNA is designed to provide a systematic summary of Australian economic activity and to present a statistical picture of the structure of the economy and the detailed processes that make up domestic production and its distribution. Within the national accounting framework, the data show how the household sector relates to the corporate and government sectors in Australia and enables comparison with the rest of the world.

As the SIH, HES and ASNA estimates of household income, wealth and expenditure have been developed for different purposes, there are a number of differences in the resulting estimates. This chapter describes and quantifies some of the main scope, definitional and methodological differences between the income, wealth and expenditure estimates from the two collections.

This analysis updates comparisons which were previously made available in the Survey of Income and Housing, User Guide, Australia (cat. no. 6553.0) and Household Expenditure Survey, Australia, Summary of Results (cat. no. 6530.0) publications. All tables containing data from the data comparisons are provided in three data cubes which are available from the 'Downloads' tab of this publication. These data cubes provide the SIH, HES and ASNA estimates, tables listing the adjustments undertaken to account for scope and measurement differences between SIH, HES and ASNA, and a comparison of individual income, wealth and expenditure items.

DATA USED IN COMPARISON

ASNA

The ASNA estimates used in this comparison are from the annual publication Australian System of National Accounts, 2016-17 (cat. no. 5204.0). Unpublished estimates from ASNA are also used to better align ASNA and SIH/HES concepts. The ASNA presents aggregate estimates which are compiled from many data sources, mostly statistical surveys or as by-products of government administrative processes. Aggregates in the ASNA are balanced between the supply of goods and services and the demand for goods and services, this can result in slight deviations from other published source data. This is done in order to maintain additivity in the estimates as well as balance within the supply-use framework. Details of the data sources used to compile the ASNA estimates are available in Australian National Accounts: Concepts, Sources and Methods, 2015 (cat. no. 5216.0).

The unadjusted estimates of income presented in this comparison are from tables 36, 37, 42, 48, and 49 in the data cubes for ASNA, 2016-17 (cat. no. 5204.0).

The ASNA estimates of wealth are those underlying the household balance sheet presented in table 41 of ASNA, 2016-17 (cat. no. 5204.0), with the memorandum item for consumer durables taken from table 10 of the same publication. Balance sheet data are presented with respect to 30 June of each year. To improve comparability with the SIH estimates, ASNA wealth data have been averaged for the two relevant SIH years, e.g. 2015-16 is the average of balance sheet estimates for June 2015 and June 2016.

The unadjusted estimates of expenditure presented in this comparison are from table 42 in the data cubes for ASNA, 2016-17 (cat. no. 5204.0).

SIH

The SIH is conducted biennially and enumerated over a 12 month period.

Income data for the period 2003–04 to 2015–16 are used in this comparison. Estimates for 2003–04, 2005–06, 2007–08, 2009–10, 2011–12, 2013–14 and 2015–16 (SIH years) relate to 'current' financial year income which is based on estimates of usual income being received at the time the data were collected from respondents. The SIH also collected full year, or annual income, with respect to the 'previous' financial year. Estimates for non-SIH years relate to 'previous' financial year income.

Wealth data from the SIH has been collected in every SIH since 2003–04, except in 2007–08. This comparison includes data for the years 2003–04, 2005–06, 2009–10, 2011–12, 2013–14 and 2015–16. Respondents are asked to report the value of their assets and liabilities at the time they are surveyed. Therefore, the wealth estimates in SIH are assumed to relate to the average level of household net worth during that year.

HES

The 2015-16 cycle of the HES collected information about income, wealth, housing and expenditure from residents in private dwellings in Australia (excluding very remote areas). Every six years, the HES and the SIH are run together, and 2015-16 is the latest cycle of the joint surveys.

For most types of expenditure, data are taken from diaries in which survey respondents record their expenditure over a two week period, beginning the day of initial contact. Diary-derived estimates therefore refer to expenditure during the reference year. Estimates for infrequently purchased or more expensive items are derived from the household questionnaire, which collects expenditure information for goods and services on a recall basis. These less frequently occurring items are collected over periods longer than the two week diary reporting period so that sufficient numbers of households report expenditure to enable the calculation of reliable expenditure estimates.

Income comparison

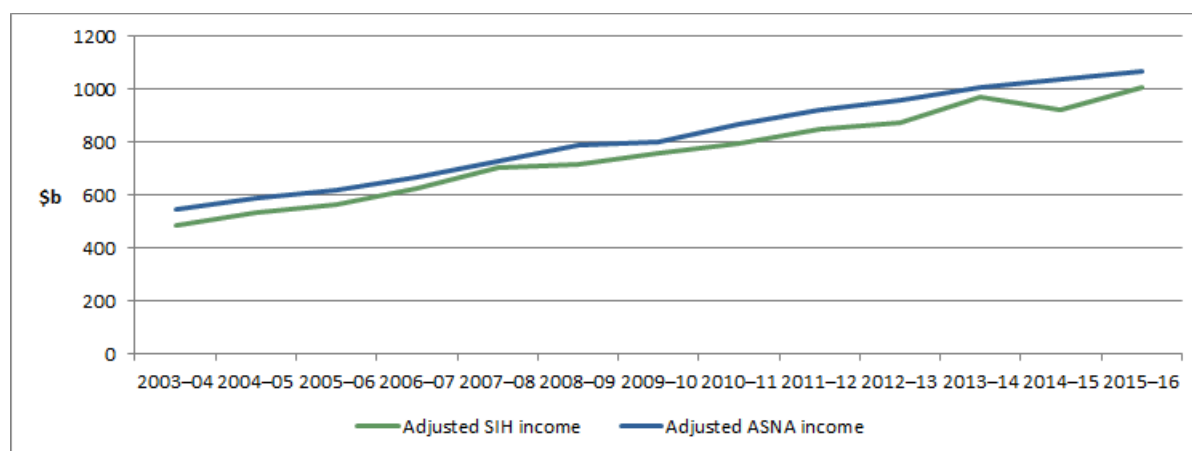
INCOME COMPARISON

The data cube 'SIH-ASNA income comparison' which is available in the 'Downloads' tab of this publication, provides the detailed comparison tables between the Survey of Income and Housing (SIH) and the Australian System of National Accounts (ASNA) estimates for the period 2003–04 to 2015–16.

SCOPE AND MEASUREMENT DIFFERENCES

There are a number of scope and measurement differences that can be quantified between the SIH and ASNA household income systems. After adjusting for these differences, the alignment of the two estimates is improved. For example, in 2015-16, the adjusted SIH income was 94% of the adjusted ASNA income (\$1,009 billion and \$1,068 billion, respectively).

Graph 1 - COMPARISON OF SIH AND ASNA HOUSEHOLD INCOME AFTER ADJUSTMENT FOR SCOPE AND MEASUREMENT DIFFERENCES



Source(s): SIH, ASNA

The main quantifiable differences, with estimates for 2015-16, are:

- SIH includes superannuation and life insurance pensions received as regular income by households

(\$41 billion) whereas ASNA does not consider these pensions as income but as transactions in the financial account, and therefore a reduction of household assets captured in the balance sheet. However, ASNA includes as income the imputed interest measures, which includes the investment income of insurance enterprises, superannuation funds and investment funds attributable to policyholders, as well as imputed interest on government unfunded superannuation arrangements (\$98 billion);

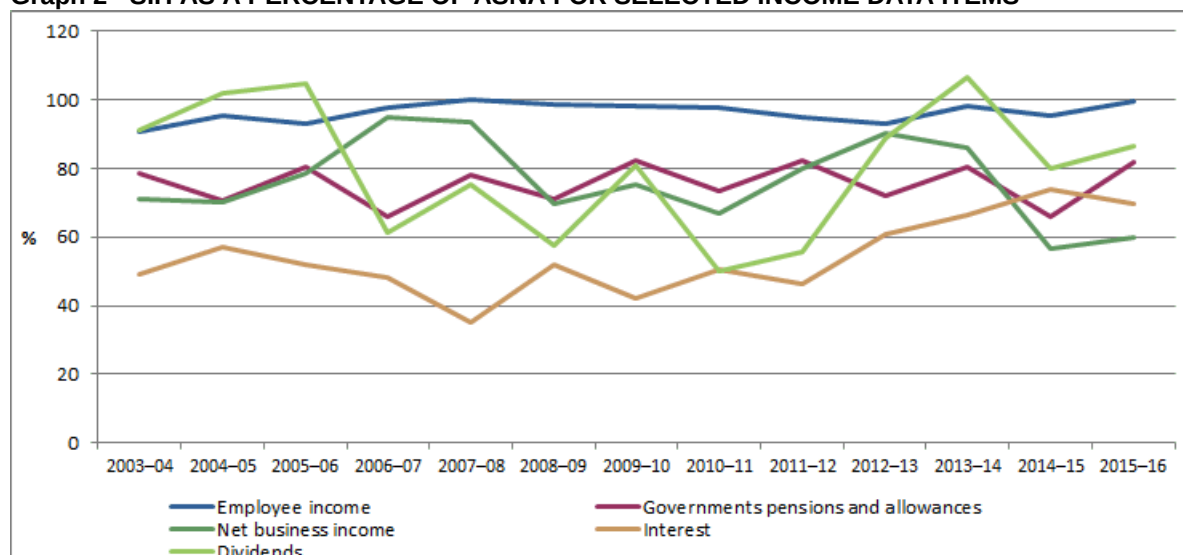
- SIH deducts a much broader range of housing and business expenses than the ASNA, resulting in differences in the measurement of income from housing and operations of unincorporated enterprises (\$114 billion in total);
- SIH includes financial support from persons not living in the household (\$9 billion), which are measured on a net basis within each sector in the ASNA, thus assumed to net out to zero across all households;
- ASNA includes income not collected in SIH, such as employers' social contributions, i.e. the compulsory contributions payable by employers to secure social benefits, such as superannuation and workers' compensation premiums (\$86 billion), non-life insurance claims (\$40 billion) and financial intermediation services indirectly measured (FISIM) on interest received (\$19 billion);
- ASNA includes income received by non-profit institutions serving households (NPISHs) such as churches and charities. Government transfers to NPISHs can be quantified (\$35 billion), but other income received such as transfers from the corporate sector, investment income and income from the sale of goods and services cannot be separately identified. NPISHs are estimated to contribute up to 4% to total ASNA household sector income; and
- Some government benefits are treated as social transfers in kind in the SIH, but as a social assistance benefits (i.e. cash payments) in the ASNA (\$10 billion).

After all adjustments, some scope differences remain which cannot be easily quantified. SIH excludes people living in non-private dwellings, and in very remote regions of Australia. It is estimated that this excludes approximately 3% of people living in Australia. Additionally, ASNA estimates include some benefits not relatable to the private households in scope of SIH, such as expenditure on institutional aged care.

COMPARISON OF INCOME DATA ITEMS

This section compares selected individual sources of income collected in SIH with items published in the ASNA, or source data available for those items. The underlying data and adjustments made to improve alignment between the two data sources are available in the SIH-ASNA Income comparison data cube available from the 'Downloads' tab of this publication.

Graph 2 - SIH AS A PERCENTAGE OF ASNA FOR SELECTED INCOME DATA ITEMS



Source(s): SIH, ASNA

Employee income

The largest component of household income is employee income. To align with ASNA measurements, an adjustment of \$8 billion was applied to SIH data to remove workers' compensation received directly through the payroll. After this adjustment SIH and ASNA results were almost the same (both just over \$720 billion).

Government pensions and allowances income

In 2015-16, Australian government pensions and allowances in the SIH were \$100 billion, which was lower (82%) than the equivalent ASNA estimate (\$123 billion).

SIH collects detailed government pensions and allowances paid to Australian residents in private dwellings by type of payment. The SIH estimates do not include pensions and allowances received by people living in non-private dwellings (e.g. nursing homes), nor by people living in very remote areas of Australia.

The related item in the ASNA is 'social assistance benefits' sourced from ABS government finance statistics which are compiled from data provided by individual government agencies to the Australian Government Department of Finance, and state government treasuries. The scope of these payments is broader than those collected in the SIH.

To better align with SIH, an adjustment has been made to the ASNA data to remove the Private Health Insurance Rebate and the Child Care Rebate which are treated as social transfers in kind in the SIH. However, adjustments have not been made for the inclusion of some education related payments made to parents to offset the cost of educating their children, or any one-off or irregular payments made by state and Commonwealth agencies that are included in ASNA but unlikely to be captured in the SIH.

Net business income

The SIH collects the profit or loss from unincorporated businesses from working sole proprietors and partners. The income earned by silent partners and non-working beneficiaries of businesses and other trusts is collected separately and included in investment income. To align with the ASNA concept of unincorporated business income, these sources of income, along with non-residential property income and royalties have been included in net business income for comparison purposes.

In the ASNA, income from production by unincorporated enterprises is referred to as gross mixed income (GMI), and is measured as income from production less intermediate consumption. Intermediate consumption consists of the value of the goods and services consumed as inputs to the production process. Other costs normally expensed in business accounts, such as interest payable on loans and depreciation are not deducted. The ASNA estimates of GMI are compiled mainly from the business tax returns of sole proprietors, partnerships and private trusts. Royalties and income from non-residential property are included in GMI.

The SIH income from the selected items that relate to net business income was \$59 billion in 2015-16, compared to the ASNA estimate of \$99 billion after adjusting GMI to remove business expenses not deducted. The higher income in ASNA may be partly due to the different classification between the ASNA and the SIH of some businesses that have a trust underlying their business operations, with the trustee listed as an incorporated entity. In the ASNA, these businesses would be classified as unincorporated enterprises whereas in the SIH, the business owners may report these businesses as incorporated enterprises (and their income included in dividend income).

Interest income

In the SIH, interest income from a range of financial accounts is collected. For the 'current' year, respondents are asked to estimate their expected interest income in the financial year. For the 'previous' year, respondents are asked to report actual interest earned.

In the ASNA, interest estimates are derived from a large number of data sources by constructing matrices of the flows of interest receivable and payable between the various sectors and subsectors of the economy. However, in the ASNA, interest receivable by financial institutions excludes payments by borrowers for the services provided by the financial institutions, and interest payable by financial institutions is lower than it would otherwise be to cover the costs of financial services provided to depositors. This service component is referred to as financial intermediation services indirectly measured (FISIM) and has been deducted from the ASNA interest income from deposits for comparison with SIH data.

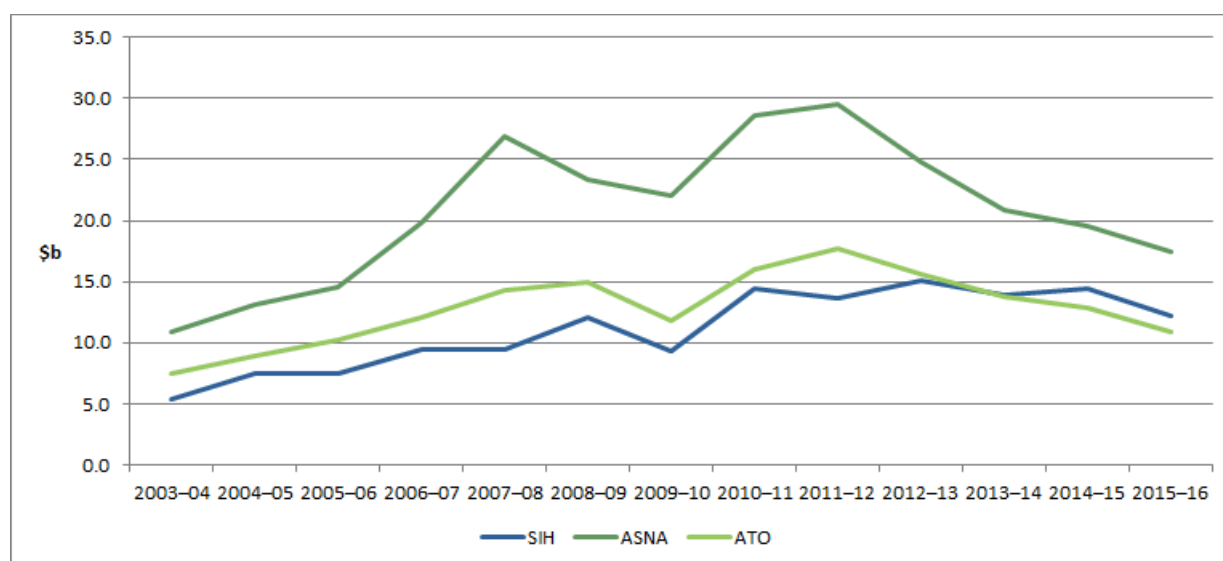
The ASNA estimate of interest income, less FISIM, is substantially higher than the SIH (\$17 billion compared to \$12 billion in 2015-16). The higher ASNA estimate of interest can be partly explained by the inclusion of interest received by unincorporated enterprises and NPISHs, and the possible over estimation of interest received by ASNA including interest linked to mortgage offset accounts.

Personal taxation data published by the ATO provide another measure of interest earned by persons in Australia. This information is the aggregated total of gross interest income reported on individual tax returns. Like the SIH interest item, income from cash management trusts and interest earned by unincorporated businesses are reported separately. The ATO interest statistic does not include interest received by persons not required to complete an individual tax return.

As shown in Graph 3, the SIH and ATO estimates align relatively closely. SIH estimates based on 'previous' year reporting (2004–05, 2006–07, 2008–09, 2010–11 and 2012–13) are closer to the ATO estimates than the estimates based on 'current' year reporting. This suggests that survey respondents provide a conservative estimate of

expected interest in the SIH for the 'current' year, but a more accurate reporting of this income when actual interest earned is known.

Graph 3 - INTEREST



Source(s): SIH, ASNA, ATO

Dividend income

In 2015-16, SIH dividends were 86% of the ASNA estimate (\$28 billion and \$33 billion, respectively). SIH dividends include dividends from publicly listed companies and public unit trusts (such as equity, cash management and property trusts), as well as dividends paid to households from their own incorporated companies. In SIH 2007-08, improvements were made to the questionnaire to separately collect information about public unit trusts and other trusts. From SIH 2013-14 onwards, franking information was imputed from ATO data rather than being collected from respondents for publicly listed companies. Both of these changes significantly improved the coverage of dividend income.

The ASNA estimates of dividends are based on data provided by the ATO. These differ from the SIH estimates as they do not include franking credits. Some of the difference can also be attributed to the scope exclusions in SIH and the inclusion of dividends received by NPISHs in the ASNA estimate.

Residential rental income

SIH income from residential property is consistently higher than the ASNA estimate (\$77 billion and \$58 billion, respectively in 2015-16). In the SIH, net profit or loss from investment properties is collected from respondents and the value of housing services accruing to owner-occupiers is imputed for the primary residence. Both estimates exclude all costs that would be borne by a landlord.

In 2015-16, a new methodology for imputing the housing value for owner-occupied dwellings was implemented in the SIH with estimates from 2003-04 recompiled using the new methodology. The new methodology for household level imputed rent estimates are explained in *Estimates of Imputed Rent, Australia, 2015-16* (cat. no. 6525.0). The information paper also quantifies the impact of the new methodology compared to the experimental method implemented for 2013-14 SIH.

In the ASNA, income from residential property is presented as gross operating surplus (GOS) on dwellings owned by persons. This income includes actual rental income as well as an imputed value of housing services accruing to owner-occupiers from both their principal residence and any additional residences such as holiday homes. GOS is calculated net of intermediate consumption costs, e.g. repairs and maintenance, the imputed service charges on finance and insurance, and body corporate fees.

To align with the SIH measurement of income from residential property, interest payable, water and sewerage costs and part of house insurance premiums have been deducted from the ASNA estimate of GOS. However, no estimate of depreciation has been deducted from the ASNA estimates.

Social transfers in kind

Social transfers in kind (STIK) have been modelled in the SIH since 2011-12. They are also available for the years

that fiscal incidence studies are conducted using data from the Household Expenditure Survey (2003–04, 2009–10 and 2015–16). The SIH and ASNA estimates of STIK both use ABS Government Finance Statistics (GFS) as the main source for valuing the cost to government of the provision of STIK.

The SIH STIK allocations have been between 2% and 6% higher than those published in the ASNA in each of the years that have been compared.

REFERENCES

Australian Bureau of Statistics (ABS) 2017, Australian System of National Accounts, 2016–17, cat. no. 5204.0

ABS 2016, Australian System of National Accounts: Concepts, Sources and Methods, cat. no. 5216.0

ATO (Australian Taxation Office) 2018, Taxation Statistics 2015–16: Individuals

Wealth comparison

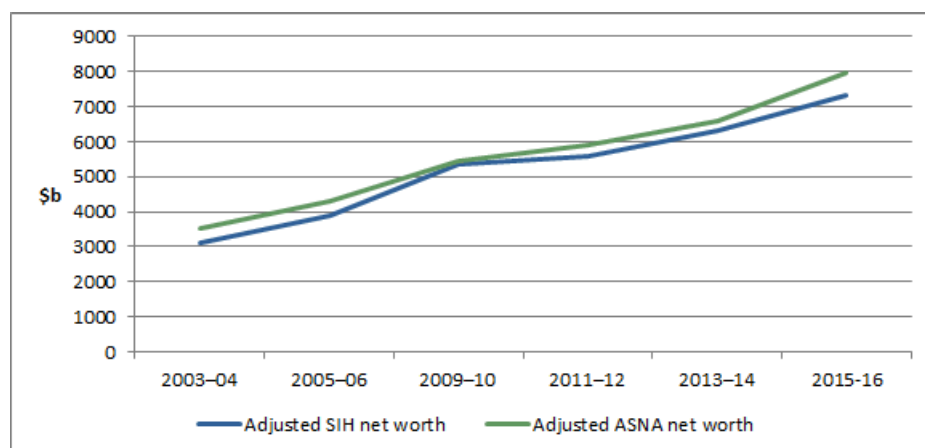
WEALTH COMPARISON

The 'SIH-ASNA Wealth comparison' data cube, available in the 'Downloads' tab of this publication, provides the detailed comparison tables between the Survey of Income and Housing (SIH) and Australian System of National Accounts (ASNA) estimates of wealth for the years that SIH wealth data are available. Wealth is only collected for the 'current' year in the biennial SIH. It was first collected in SIH 2003–04 and has been collected in all subsequent surveys except SIH 2007–08.

SCOPE AND MEASUREMENT DIFFERENCES

There are a number of scope and measurement differences that can be quantified between the SIH and ASNA household wealth estimates. After adjusting for these differences, the SIH estimate of the value of net worth was 92% (\$7,325 billion) of the ASNA estimate (\$7,951 billion)

Graph 1 - COMPARISON OF SIH AND ASNA NET WORTH AFTER ADJUSTMENT FOR SCOPE AND MEASUREMENT DIFFERENCES



Source(s): SIH, ASNA

The quantifiable differences, with estimates for 2015–16, are:

- SIH includes the value of household contents and motor vehicles used for private purposes (\$846 billion). The most closely related ASNA item is the value of consumer durables (\$357 billion) which is not included in the ASNA estimate of net worth in the household sector balance sheet but is included as a memorandum item in the National Balance Sheet (Table 10, cat. no. 5204.0). The valuation methods differ: ASNA estimates actual value, taking into account depreciation; SIH uses insurance value which is normally based on a 'new for old' basis. ASNA consumer durables exclude clothing and household textiles, artworks and antiques that are held as a store of value, and all non-durable household goods;
- ASNA includes other assets not collected in SIH, including unfunded superannuation claims, i.e. the

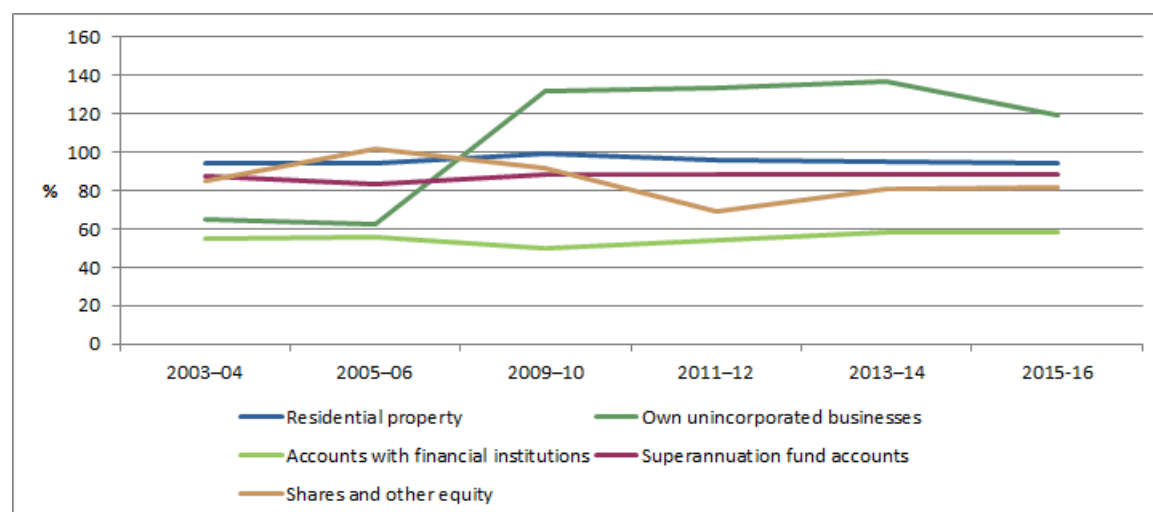
liability of governments to pay superannuation benefits to their employees for which they have not set aside funds (\$439 billion); the technical reserves of general and life insurance corporations, i.e. policy holders' net equity in, or claims on, the reserves of general and life insurance corporations which are not relatable to individual households and equate to prepayments of premiums and reserves held to cover outstanding claims (\$159 billion), and the capitalised costs of transfers of ownership on real estate transactions, such as stamp duties, legal fees and real estate agents' commissions (\$234 billion); and

- ASNA include the bank deposits of non-profit institutions serving households (NPISHs), such as churches and charities, net of bank borrowings (\$20 billion).

WEALTH ITEMS

Graph 2 shows the alignment between the SIH and ASNA for selected wealth data items.

Graph 2 - SIH AS A PERCENTAGE OF ASNA FOR SELECTED ASSETS



Source(s): SIH, ASNA

Residential property assets

Residential property is the largest asset held by the household sector. In 2015–16, the SIH estimate of the value of residential property was 94% (\$5,300 billion) of the ASNA estimate (\$5,628 billion).

The SIH collects data about the value of dwellings including owner occupied dwellings, second homes (such as holiday homes) and rental investment properties, if not reported as assets of an unincorporated business. Estimates are based on the gross amount respondents would expect to receive if they were to sell their property at the time of interview.

The ASNA uses estimates of the total value of residential dwellings at market value sourced from the quarterly ABS Residential Property Price Indexes: Eight Capital Cities (cat no. 6416.0). The estimates include the total value of residential land plus the dwelling. The value of residential dwellings is based on multiplying the mean price of residential dwellings by the number of dwellings. The calculation is undertaken at the locality level and then aggregated to State and Territory and National level. The mean price of residential dwellings is based on market real estate and Valuers General data. Counts of total dwellings are obtained from the ABS Census of Population and Housing. For intercensal years, dwelling counts are extrapolated forward using dwelling completions, net of demolitions.

Own unincorporated businesses

In the SIH, respondents are asked to provide a net estimate of the value of their own unincorporated businesses (i.e. net of liabilities). Therefore, no information is available about the asset and liability composition of this component. For the purpose of this comparison, the values of non-residential property and private trusts reported in the SIH have been included in the selected assets listed in Table 5. However, any liabilities related to the non-residential property cannot be separately quantified. The increase in the SIH estimate from 2009–10 relates to the separate valuation of private trusts (\$183 billion in 2015–16) which have been included in this comparison. Some of this trust income is likely to be reported in other components of the ASNA, including 'Shares and other equity'.

The ASNA includes information about the individual assets and liabilities by type, and does not identify which assets

or liabilities relate to unincorporated business activities and which are used for other purposes. However, some forms of assets and liabilities are most likely to relate to business activities.

In 2015–16, the SIH net value of the selected assets that most closely relate to the operations of unincorporated businesses was \$565 billion, while the net value of the selected ASNA assets and liabilities was \$475 billion.

Accounts held with financial institutions

The SIH items 'accounts held with financial institutions' and 'offset accounts' are compared to the deposit component (excluding deposits of NPISHs) of the ASNA item 'deposits', and the ASNA item 'loans and placements', that is, deposits with other financial institutions. The SIH items were 58% of the ASNA items in 2015–16 (\$524 billion and \$904 billion, respectively).

The differences are partly explained by the inclusion of deposits belonging to unincorporated businesses in ASNA items. Deposits of unincorporated businesses are not included in 'accounts held with financial institutions' and 'offset accounts' in the SIH. These values cannot be separately identified in the SIH, as account balances are reported in net value of these businesses. In 2015-16, one million households were estimated to own an unincorporated business in the SIH. The scope of the SIH also excludes people living in non-private dwellings who may hold accounts with financial institutions.

Superannuation funds

Superannuation is the largest financial asset of households. Respondents are asked to report the total balance in each of their superannuation funds from their last superannuation statement.

The corresponding ASNA item is the pension fund component of insurance technical reserves. The ASNA estimate is derived from information provided to regulatory authorities by the superannuation funds and the ATO for the self-managed funds.

In 2015–16, the value of superannuation assets reported in the SIH was lower than the ASNA estimate (\$1,696 billion and \$1,921 billion, respectively).

Shares and other equity (including own incorporated business)

The total value of the selected SIH items that relate to shares and own incorporated business equity was \$667 billion in 2015–16, compared to the corresponding ASNA estimate of \$817 billion.

In the ASNA, the values of listed shares and some unlisted shares are calculated as residuals, that is, the total value of each of these types of shares owned by all sectors is estimated, and the value of shares owned by sectors other than households are subtracted to derive the value of shares owned by the household sector. However these residual items are validated against other economic indicators and information regarding household wealth. The values for other unlisted shares are derived from a range of reported data and other imputed estimates where householders are known to have an ownership interest.

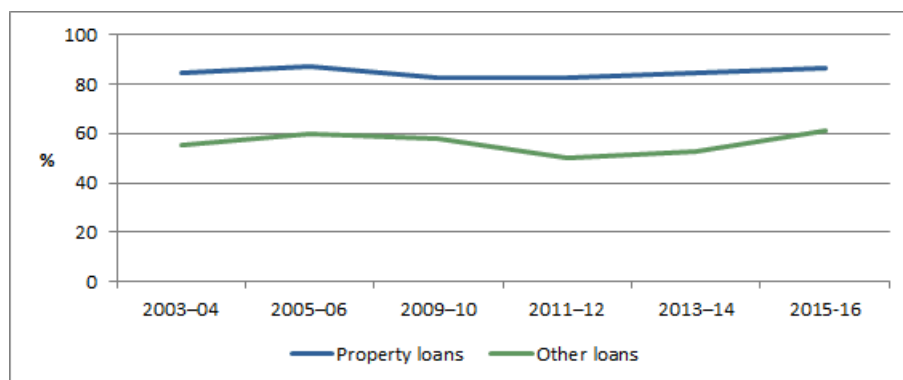
Property loans

In 2015–16, total property loans in the SIH were \$1,326 billion compared with \$1,534 billion in ASNA.

SIH property loans include the principal outstanding on loans, where the loans have been used both to finance the purchase or construction of, or alteration or addition to, an owner occupied dwelling, or to finance the purchase of other property, as well as loans for non-residential property not treated by respondents as part of the liabilities of their unincorporated business. It does not include loans for dwellings respondents regard as assets of their unincorporated businesses.

In the ASNA, loans for housing relate to all loans originally for the purpose of housing. In previous years, some banks incorrectly reported housing loans and deposit categories to APRA.

Graph 3 - SIH AS A PERCENTAGE OF ASNA FOR SELECTED LIABILITIES



Source(s): SIH, ASNA

Other loans

The SIH estimate of the value of other loans includes study loans, credit card debt and loans for purposes other than property or business. In 2015-16, these were valued at \$173 billion in the SIH, compared with \$283 billion in the ASNA.

ASNA includes loans of unincorporated businesses if they were not secured against a residential property, whereas in the SIH, these loans are likely to be included in the net value of the business, and therefore not reported as a separate liability. There may also be difficulties in dividing aggregate financial data into sector specific components in the ASNA and some loans, such as those associated with vehicle finance leases, can be difficult to allocate between business purposes and personal purposes, for both reporting in SIH and in compiling the ASNA estimates.

REFERENCES

ABS (Australian Bureau of Statistics) 2017, Australian System of National Accounts, 2016–17, cat. no. 5204.0

ABS 2016, Australian System of National Accounts: Concepts, Sources and Methods, cat. no. 5216.0

Expenditure comparison

EXPENDITURE COMPARISON

INTRODUCTION

Household Expenditure Survey (HES) estimates are used to analyse the expenditure patterns of households across the population and to compare levels of expenditure between various population subgroups. These analyses support the development, implementation and evaluation of social and economic policies, particularly for potentially disadvantaged groups such as pensioners, one-parent families and the unemployed. The HES estimates of expenditure are also used in determining the 'basket of goods' that is used to compile the Consumer Price Index (CPI) as well as the relative importance of each expenditure class in calculating the index.

The Australian System of National Accounts (ASNA) also provides estimates of expenditure, which is comprised of the household sector and Non-profit Institutions Serving Households (NPISH). The ASNA estimates of expenditure are compiled from many sources, most of which do not provide information for different population subgroups within the household sector. The ASNA is designed to provide a systematic summary of economic activity of the Australian economy and to present a statistical picture of the structure of the economy and the detailed processes that make up domestic production and its distribution. Within the national accounting framework, the data show how the household sector relates to the corporate and government sectors in Australia and to the rest of the world.

As the HES and ASNA estimates of household expenditure have been developed on a different scope basis for different purposes, there are a number of differences in the resulting estimates of expenditure. This comparison presents data on the consumption expenditure of households from the two data sets and describes and quantifies some of the main scope, definitional and methodological differences between them.

DATA USED IN COMPARISONS

The HES and the ASNA estimates of expenditure on goods and services are presented for the years 2003-04, 2009-10 and 2015-16 (Tables 1 and 2 of data cube 'HES-ASNA expenditure comparison').

The HES is conducted six-yearly and enumerated over a 12 month period. For most types of expenditure, data are taken from diaries in which survey respondents record their expenditure over a two week period, either by attaching their shopper dockets or by writing down their expenditures. Diary derived estimates therefore refer almost entirely to expenditure during the reference year. Estimates for infrequently purchased or more expensive items, or for services which are billed periodically, are derived from the household questionnaire which collects expenditure information for goods and services on a recall basis (often supported by billing documentation). These less frequently occurring expenditures are collected for recall periods longer than the two week diary reporting period so that sufficient numbers of households report expenditure to enable the calculation of expenditure estimates with relatively low sample error. For example, in 2015-16, survey respondents were asked to recall how much they spent on furniture and appliances over the last three months, and on motor vehicle registration over the last 12 months. For other items, such as insurance, rent and utilities bills, survey respondents are asked for the value of their most recent bill and the length of time to which the payment relates. Estimates derived from the household questionnaire therefore refer to some time periods prior to the reference year as well as during the reference year.

The estimates of expenditure are initially coded to a detailed household expenditure classification and the results in the Household Expenditure Survey, Australia: Summary of Results, 2015-16 (cat. no. 6530.0) product are generally presented according to that classification. However in this comparison (and Data Cube 12 of the summary of results product), the HES expenditures have been concorded to the United Nations' Classification of Individual Consumption by Purpose (COICOP), which broadly aligns with the classification used in the ASNA. All estimates have been converted from weekly to annual figures.

The ASNA estimates of expenditure in this comparison are from Table 42 'Household Final Consumption Expenditure' (HFCE) in Australian System of National Accounts, 2016-17 (cat. no. 5204.0). The ASNA estimates consist of expenditure by households and by private non-profit institutions serving households (NPISHs) on goods and services. The ASNA is compiled from many data sources, most of which derive from statistical surveys or as a by-product of government administrative processes. Details are available in Australian National Accounts: Concepts, Sources and Methods (cat. no. 5216.0).

SCOPE AND MEASUREMENT DIFFERENCES

There are a number of scope and measurement differences that can be broadly quantified between the HES and the ASNA household expenditure estimates (Table 3 of data cube 'HES-ASNA expenditure comparison').

The HES estimates of household expenditure include the imputed rent for subsidised rentals which are not included in the expenditure attributed to the household sector in the ASNA (\$8 billion in 2015-16). For comparison purposes, this expenditure is deducted from the HES estimates in Table 3.

The ASNA household sector estimates of expenditure also include some components which are not included in the HES measure. The components which can be identified, and where a deduction from the ASNA aggregate can be estimated, totalled approximately \$103 billion in 2015-16, and include:

- imputed service charges for life insurance and superannuation funds, imputed financial intermediation services indirectly measured (FISIM), and an imputed service charge for workers' compensation insurance (together estimated at \$67 billion);
- current expenditure of NPISHs such as churches and charities on goods and services (estimated at \$36 billion)

The net result of adjusting for the quantifiable differences shown in Table 3, is to bring the aggregate results closer together. In 2015-16, the adjusted HES expenditure was \$710 billion compared with adjusted ASNA expenditure of \$865 billion. However, there are three remaining scope differences that cannot be easily quantified. The HES excludes both people living in non-private dwellings and people living in very remote regions of Australia. It is estimated that this excludes approximately 3% of people living in Australia. The ASNA household sector estimates also include expenditure by NPISHs across all consumption categories. While NPISH expenditures made for education, health and 'other services' are estimated to be about \$36 billion in 2015-16, the remaining expenditure by NPISHs is not quantified and therefore not allocated by commodity.

COMPARISON OF EXPENDITURE ITEMS

The following section compares expenditure on selected HES items with expenditure items published in the ASNA, or with the source data available for those ASNA expenditure items.

Goods

In the HES, expenditure on most goods is collected from diaries in which survey respondents, aged 15 years and over, record their expenditure over a two week period. The range of goods includes, for example, food, clothing,

household consumables and personal effects. Goods that are purchased less frequently and that are of higher value, such as household appliances, furniture and floor coverings, and audio visual and photographic equipment, are collected from a household spokesperson using a three month recall period. The estimates are compiled net of trade-ins where applicable.

ASNA expenditure estimates for goods are benchmarked primarily to the Retail and Wholesale Industry Survey which is conducted about every seven years (last conducted in 2012-13). The monthly Retail Trade Survey is then used to extrapolate movements in expenditure between benchmark years. A range of other sources are used for expenditure for which retail surveys are not able to provide an accurate measure. Other sources include information obtained about sales by manufacturing and wholesale establishments and sales by organisations selling directly to the public.

The ASNA includes an estimate for the value of goods produced at home for own consumption, such as home grown fruit and vegetables. This consumption is not captured in the HES. This component is not separately identifiable in the ASNA estimates and has not been deducted in the comparisons.

In 2015-16, the adjusted HES estimate for expenditure on the selected goods listed in Table 4 (of data cube 'HES-ASNA expenditure comparison') was \$179 billion, compared to \$245 billion for the same goods in the ASNA. Part of the lower estimate for HES can be accounted for by scope differences, with the exclusion of expenditure by people living in non-private dwellings and very remote regions, as well as expenditure by NPISHs which cannot be quantified at the component level. However, it is also possible that respondents in the HES omitted to report some expenditure, particularly small value purchases for which no shopping receipt is received.

Alcoholic beverages and tobacco

HES estimates of expenditure on alcoholic beverages and tobacco are reported by respondents in their two week expenditure diary.

ASNA benchmarks for alcoholic beverages are compiled using data from the Retail and Wholesale Industries Survey and other ABS surveys of businesses in the hospitality industry. These benchmarks are extrapolated forward using monthly retail sales data. Tobacco expenditure is estimated using information from the Australian Customs Service from documents lodged for excise purposes as well as for imports and exports.

In 2015-16, the HES estimates for expenditure on alcoholic beverages (\$10 billion) and tobacco (\$6 billion) were much lower than the ASNA estimates (\$19 billion and \$17 billion, respectively). It is generally acknowledged that expenditures on alcohol and tobacco are underreported in household expenditure surveys.

Housing rent

Actual rent

Information on household expenditure on rent for housing is collected in the biennial Survey of Income and Housing (SIH) as well as in the HES which is a subsample of SIH respondents. In the HES and SIH, the actual gross rent paid by renters is reported during the interview with the household spokesperson.

The COICOP item 'Actual rentals for housing' includes not only rent payments for the selected dwelling, but also includes rent payments for other properties and non-holiday accommodation to better align with ASNA estimates. Rent payments for other properties and non-holiday accommodation are not collected in SIH only years.

In producing the ASNA imputations of gross actual rent, Census data are used to provide a benchmark for rental costs and the stock of dwellings. The rent component of the CPI and other factors are used to extrapolate the rental benchmarks forward, while the benchmark for the stock of dwellings is updated using ABS building completions data and an estimate for demolitions and other stock changes.

In 2015-16, the HES and ASNA estimates of actual rent were \$50 billion and \$45 billion, respectively.

Imputed rent for owner-occupiers

In the HES, the services for owner-occupied housing are estimated as the market value of the rental equivalent. The market value is estimated using the relationship between dwelling price (available from Valuers General data) and the market rent that a dwelling would receive for the smallest available geographic area (available from Census data). Rental yields based on average dwelling prices and reported rents have been calculated for each rental dwelling in the Census. These rental yields are then aggregated by strata to derive a final rental yield which is applied to the HES reported value of each owner-occupied dwelling. Imputed rent is estimated for the primary residence of owner-occupiers.

The COICOP item 'Imputed rent for rentals' includes not only imputed rent for owner-occupiers, but also the subsidies received by renters. For the purpose of this confrontation, these subsidies have been deducted from the

COICOP estimates, as shown in Table 6 of data cube 'HES-ASNA expenditure comparison'.

Imputed rent in the ASNA is estimated for owner-occupiers not only for their primary residence, but also from any secondary residences such as holiday homes.

In 2015-16, the HES and ASNA estimates of imputed rent for owner-occupiers were \$144 billion and \$142 billion, respectively.

Purchase and operation of own vehicles

HES estimates of expenditure include new and second hand vehicles purchased in the last 12 months, net of trade-ins or vehicles sold in the same period. Fees and charges associated with the purchase, such as stamp duty, are excluded. From 2009-10 HES, more detailed commodities information was collected for salary sacrificed motor vehicles to improve the separate estimates of expenditure on motor vehicles and any associated running costs such as fuel, insurance, registration, servicing and tyres. Also from 2009-10 HES, motor vehicles provided free or at a reduced cost by employers to their employees for their own private use were included in the expenditure estimates.

The ASNA estimates of household sector expenditure include the total value of new and second hand vehicles purchased, excluding stamp duty and other fees. For second hand vehicles traded through dealers, the purchased trade-in values are netted so that only the dealers' margins are included, consistent with the HES treatment. Similarly, the ASNA aggregate estimates for the household sector do not include private sales of used vehicles between households as this expenditure is netted out in the aggregate accounts, consistent at the total sector level with the HES treatment. ASNA expenditure on the operation of vehicles is estimated using data from the Survey of Motor Vehicle Use (cat. no. 9208.0), Retail and Wholesale Industries (cat. no. 8622.0), Australian Industry (cat. no. 8155.0), State government car registrations and the HES. Salary sacrificed vehicles are included, as are the benefits the household sector derives from the personal use of vehicles provided by employers.

In 2015-16, the HES and ASNA estimates for the purchase of vehicles were \$24 billion and \$23 billion, respectively.

Education services

The HES collects education related expenditure during the last 12 months, including, for example, tuition, boarding fees and school sports fees. Repayments in the last 12 months against student loans, such as the HECS and HELP schemes, are also collected.

In addition to the direct expenditures reported in HES, the ASNA also includes current education related expenditures by NPISHs, such as students in the Catholic education system and most other private schools. These expenditures are estimated to contribute approximately 40% of the ASNA estimate (or \$18 billion) in 2015-16.

After deducting expenditure by NPISHs, the ASNA education services expenditure estimate was \$27 billion in 2015-16, compared with the HES estimate of \$21 billion. Note also that the ASNA estimates include accrued expenditures against student loan liabilities at the time the debt accrues, rather than when the student repays the loan.

Health

The HES collects information from the household spokesperson on household spending on medical and other health services for the previous three months, net of any reimbursements such as refunds from private health funds. Spending on health related goods, such as prescriptions and first aid supplies, are reported in the two week expenditure diary completed by all survey respondents aged 15 years and over.

There are two important differences between the ASNA and HES estimates of expenditure on health. Firstly, the ASNA includes expenditure by NPISHs on behalf of the household. Many private hospitals and nursing homes are run by NPISHs, and all expenditure by these institutions is allocated to health. Secondly, the expenditures on health by residents of non-private dwellings, such as nursing homes, and by people living in very remote regions of Australia are excluded from the scope of the HES.

In 2015-16, estimates for expenditure on health in the HES and ASNA (after removing NPISH expenditure), were \$20 billion and \$55 billion, respectively. However, the different treatment of refunds for health services, means that some of the ASNA expenditure is captured as insurance services expenditure in the HES.

Insurance and other financial services

The HES uses the group questionnaire to collect the most recent payments made for non-life insurance, for example, health, car and household contents insurance. Expenditure on building insurance is not collected for rental investment properties since expenses for rental properties are deducted from income when survey respondents report their profit or loss from this investment. Financial services in the HES includes only expenditure on direct fees paid to financial institutions such as account keeping fees and BPay fees. Interest on loans is not

included. Estimates are compiled from fees reported on the most recent bank statement.

The ASNA estimates for insurance attributed to the household sector include only an imputed service charge for insurance services, which is calculated as the difference between premiums paid plus investment earnings on premiums (called premium supplements), less expected claims. The ASNA insurance estimates also include life insurance and superannuation funds, for which the imputed service charge is equal to the administrative expenses of operating the funds. The ASNA estimates also include any profits of non-mutual funds, and workers' compensation insurance, neither of which are measured in the HES.

Direct charges paid to financial institutions by households are included in ASNA, as they are in HES. However, other financial services expenditures attributed to the household sector in the ASNA include an imputed service charge paid by households for financial services associated with loans and deposits. These service charges are calculated as the difference between interest rates financial institutions pay on money borrowed from households (deposits) and money lent to households (loans). This service charge is called financial intermediation services indirectly measured (FISIM).

In 2015-16, HES estimates of expenditure on insurance and other financial services were \$38 billion compared with the ASNA estimate of \$17 billion (after excluding the imputed service charges). It is not possible to quantify all of the differences between the two estimates such as the exclusion of building insurance in the HES estimate and the differences in the measurement of insurance services between the two sources.

Other services

HES expenditure on services that are paid for at the time of use are generally collected in the two week expenditure diary. This includes expenditure on transport services (such as bus, rail and taxi fares), takeaway food and meals in restaurants, recreational activities (such as cinema and sporting tickets) and expenditure on travel for less than four days. For less frequent or more complex items, expenditure is collected on the group questionnaire, including the most recent bill for utilities and communication services, such as gas, electricity, internet service providers (ISPs) and telephone services. Expenditure on personal travel for four nights or more is also collected on the group questionnaire. Where possible, the cost of expenditure on individual travel items is collected and attributed to the relevant commodity. The exception is travel purchased as part of a package.

In the HES, child care expenditure is collected on the individual questionnaire from parents or guardians with children 12 years and under. The usual weekly cost of child care in the last four weeks is collected, with expenditure calculated net of child care benefits and the child care rebate.

In addition to HES data, the ASNA benchmark estimates of household sector expenditure on services are obtained from a range of sources, including:

- Retail and Wholesale Industries, Australia (cat. no. 8622.0);
- Government Finance Statistics, Australia (cat. no. 5512.0); and
- Australian Industry (cat. no. 8155.0).

There are differences between HES and the ASNA in the categorisation of some services. In the ASNA, expenditure on package holidays is separated out so that expenditure on individual services is attributed to the relevant item e.g. transport services, accommodation services, recreational and cultural services.

In total, expenditure in 2015-16 on the selected services, was \$164 billion in the HES. About 30% of the ASNA expenditure on 'Other services' is estimated to be miscellaneous expenditure by NPISHs. After deducting this NPISH expenditure, the ASNA estimate was \$212 billion in the same year. Other expenditure by NPISHs is not able to be quantified and is therefore excluded. The ASNA household sector expenditure estimates also cover a broader scope of accommodation services than the HES, encompassing the costs of hostel accommodation for the aged or disabled (excluding those providing medical supervision).

Further information

Comparisons between the ASNA sector level estimates and the household survey estimates for income and wealth are also presented in this product. Data cubes for each comparison are also provided in the 'Downloads' tab of this product.

A concordance between the HEC and COICOP classifications used to classify expenditure data from the HES is also available from the 'Downloads' tab of this product.

REFERENCES

ABS (Australian Bureau of Statistics) 2017, Australian System of National Accounts, 2016–17, cat. no. 5204.0

About this Release

Describes the definitions, concepts, methodology and estimation procedures used in the 2015-16 cycle of the Household Expenditure Survey (HES) and the Survey of Income and Housing (SIH). These national household surveys are collected jointly every six years. It contains the questionnaire, a list of all data items on the file and lists of output data items, and background information about the survey. It is designed to assist researchers and analysts in using housing, income, wealth and expenditure survey data produced by the Australian Bureau of Statistics (ABS).

History of Changes

This document was added or updated on 16/11/2017.

06/07/2018

This supplementary issue includes the 2015-16 HES and SIH Data Item List with FIS items now available, as well as the Micro-Macro analysis. An appendix on the changes to processing of Government Payments has also been added.

16/11/2017

This supplementary issue includes the addition of the Lorenz Curve and minor formatting amendments .

25/10/2017

This supplementary issue includes the 2015-16 HES and SIH Data Item List.

Explanatory Notes

Glossary

GLOSSARY

Accounts with financial institutions

Accounts held with banks or any other financial institutions, e.g. credit unions, building societies, insurance companies, finance companies. Examples of types of accounts include: passbook, statement, cheque or term deposit accounts.

Acute care institution benefits

Includes social transfers in kind relating to all activities of acute care hospitals, free-standing hospices, alcohol and drug treatment centres, and same-day establishments except activities involving health research and formal health education. Acute care institution benefits are a component of health benefits.

Age

Person's age in years last birthday.

Age pension

Households that receive income from age pensions or Department of Veterans' Affairs (DVA) service pension, as well as additional cash allowances such as rent assistance. Age pensions are a component of social assistance benefits in cash.

Allocated pensions

Allocated pensions (also known as account-based pensions) are a regular income stream paid by superannuation funds. The value of the pension is calculated based on the amount of money accumulated in people's superannuation accounts and varies depending on the investment earnings of the fund.

Annuities

Annuities are guaranteed regular and recurring receipts, generally from an insurance company, the right to which

was purchased with a lump sum or regular contributions at some point in the past.

Assets

An entity of a financial or non-financial nature, owned by the household or its members, and from which economic benefits may be derived by holding or use over a period of time.

Australian Statistical Geography Standard (ASGS)

The ASGS came into effect in July 2011 to replace the Australian Statistical Geographical Classification (ASGC). The ASGS provides a common framework of statistical geography used by the ABS to enable the publication of statistics that are comparable and spatially integrated. Its purpose is to outline the conceptual basis of Mesh Blocks, the regions of the main structure and the Greater Capital City Statistical Areas and their relationships to each other. For further information refer to Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011 (cat. no. 1270.0.55.001) and <<https://www.abs.gov.au/geography>>.

Australian Standard Geographical Classification (ASGC)

The ASGC was replaced by the Australian Statistical Geography Standard (ASGS) in July 2011. For further information refer to Australian Standard Geographical Classification (ASGC) (cat. no. 1216.0) and <<https://www.abs.gov.au/geography>>.

Average weekly expenditure

Value obtained by dividing the estimated weekly expenditure of a group of households by the estimated number of households in the group.

Balance of State

Under the Australian Standard Geographical Classification (ASGC), Balance of State represents each state or territory not defined as Capital City. The ASGC has been replaced with Australian Statistical Geography Standard (ASGS), and areas outside Greater Capital City Statistical Areas are known as Rest of State. See definition of Rest of State.

Before and/or after school care

A type of formal child care provided for school aged children before and/or after school during the school term. Some services also provide care on 'pupil free days'. The services usually make use of established facilities such as schools, community halls, and recreation centres.

Body corporate fees

Compulsory payments to the governing body of a block of home units or apartments. The governing body consists of home unit owners or their representatives.

Bond

In the context of *investments*, a bond is a certificate of ownership of a specified portion of a debt. May be issued by a government agency or private corporation to individuals or companies and usually bears a fixed interest rate of return on investment. In the context of rented dwellings, bond is money paid in addition to any rent by a new tenant as surety against damages to the premises rented.

Broad expenditure group

The broadest level of the Household Expenditure Classification used in the 2015-16 publication. A list of the detailed expenditure items making up each broad expenditure group will be included in the 2015-16 User Guide in the downloads tab.

Canadian National Occupancy Standard (CNOS) for housing appropriateness

A standard measure of housing utilisation that is sensitive to both household size and composition. Based on the following criteria used to assess bedroom requirements, households requiring at least one additional bedroom are considered to be overcrowded:

- there should be no more than two persons per bedroom
- a household of one unattached individual may reasonably occupy a bed-sit (i.e. have no bedroom)
- couples and parents should have a separate bedroom
- children less than five years of age, of different sexes, may reasonably share a room
- children five years of age or over, of different sexes, should not share a bedroom
- children less than 18 years of age and of the same sex may reasonably share a bedroom, and
- single household members aged 18 years or over should have a separate bedroom.

The CNOS variable on the file compares the number of bedrooms required with the actual number of bedrooms in the dwelling.

Capital city

Capital city under the Australian Standard Geographical Classification (ASGC) refers to Australia's six State capital city Statistical Divisions and the Darwin Statistical Division as defined in the Australian Standard Geographical

Classification (ASGC) (cat. no. 1216.0). For the Australian Capital Territory the estimates relate predominantly to urban areas, and all of the Australian Capital Territory is defined as a capital city for this publication. Capital city estimates for the Northern Territory are not available on the CURF. The ASGC has been replaced with Australian Statistical Geography Standard (ASGS), see definition of Greater Capital City Statistical Area.

Changeover buyer

A household which bought their dwelling in the three years prior to being interviewed, and either the reference person or partner had owned or been purchasing a home previously.

Child care assistance

Includes social transfers in kind relating to the Child Care Benefit and Child Care Rebate and associated administrative costs. Child care assistance is a component of welfare benefits.

Child Care Benefit (CCB)

Assistance in the form of a payment made by the Australian Government to help with the costs of child care for families who use either approved or registered child care. The scheme is means-tested and families can either receive CCB as a lump sum payment, or as reduced child care fees.

Child Care Rebate (CCR)

Child Care Rebate (CCR) covers 50 per cent of out-of-pocket child-care expenses, up to a maximum amount per child per year. The CCR is available for families who qualify for Child Care Benefit (CCB) and meet a work, study and training test.

Children's assets

Any assets owned by children, aged 14 years or less, in the household that are not included in the value of the household contents. These assets can be financial (e.g. a child's bank accounts, assets held in trusts, bonds, debenture stock) or can be non-financial (e.g. jewellery or property held in trust for the children). Children's assets is no longer collected separately in the SIH, but is a component of 'other assets'.

Classification of Individual Consumption According to Purpose (COICOP)

The international standard classification framework for classifying consumption expenditures on goods and services.

Commonwealth Rent Assistance (CRA)

Commonwealth Rent Assistance (CRA) is a non-taxable income supplement paid through Centrelink to individuals and families who rent in the private rental market. It is only paid to recipients of another government benefit or pension, and paid in conjunction with that other benefit.

Community health service benefits

Includes social transfers in kind relating to community health services such as domiciliary nursing services, well baby clinics, dental health services, health services provided to particular community groups, family planning services, alcohol and drug rehabilitation programs not involving admission, and other health services provided in a community setting. Also includes expenditure on patient transport. Community health service benefits are a component of health benefits.

Consumer Price Index (CPI)

A general measure of price inflation for the household sector in Australia. Specifically, it provides a measure of changes, over time, in the cost of a constant basket of goods and services acquired by the capital city households in Australia.

Contents of dwelling

This is a non-financial asset and comprises an estimated value of household contents. Examples include: clothing, jewellery, hobby collections, furniture, paintings and other works of art, soft furnishings and electrical appliances other than fixtures such as stoves and built-in items.

Cost of child care

The cost, gross of Child Care Benefit and the Child Care Rebate, to parents for a child to attend care. In most cases, where the Child Care Benefit was paid directly to the child care service provider, the cost of care was directly collected in the survey. In a small number of cases, where the Child Care Benefit was not paid directly to the provider, the Child Care Benefit was estimated.

Couple

See One family households.

Couple family with dependent children

See One family households.

Couple, one family household

A one family household consisting of:

- one couple only
- one couple, with their dependent and/or non-dependent children only
- one couple, with or without children, plus other relatives
- one couple, with or without children and other relatives, plus unrelated individuals.

Credit card debt

The amount owing on the respondent's latest credit card account statement (including any government, interest of financial institution charges). Includes amounts owing on specialised retail shopping cards as well as general credit cards such as Visa, Mastercard and store credit cards but excludes Visa and Mastercard debit only cards.

Current financial year income

Income earned in the period 1 July 2015 to 30 June 2016.

Debenture

A formal acknowledgement of indebtedness by a company. Interest is paid by the company at specific intervals. A loan or deposit can be called a debenture if it is secured over company assets. Unlike shareholders, debenture holders have a creditor relationship with the company. Instead of dividends, debenture holders receive interest on their debentures which is accounted for by the company as an expense.

Deciles

Groupings that result from ranking all households or persons in the population in ascending order according to some characteristic such as their household income and then dividing the population into 10 equal groups, with each group comprising 10% of the estimated population.

Dependent children

All persons aged under 15 years; and persons aged 15–24 years who are full-time students, have a parent in the household and do not have a partner or child of their own in the household.

Diary

A notebook in which each person aged 15 years and over who was usually resident in the selected dwelling recorded his or her daily expenditure over two weeks.

Disability and carer payment

Households that receive income from Carer allowance, Carer payment, Disability Pension Department of Veterans' Affairs (DVA) or Disability Support Pension.

Disability support pension

Includes the Disability Support Pension, as well as additional cash allowances such as rent assistance. Disability support pension is a component of social assistance benefits in cash.

Disposable income

Gross income less income tax, the Medicare levy and the Medicare levy surcharge i.e. remaining income after taxes are deducted, which is available to support consumption and/or saving. Income tax, Medicare levy and the Medicare levy surcharge are imputed based on each person's income and other characteristics as reported in the survey. Disposable income is sometimes referred to as net income.

Dividends

Dividends may be the main source of income for people who run their own incorporated business. They can be:

- 'franked' which are shares of company profit paid or credited by an Australian resident public company from profits on which Australian company tax has been paid, or
- 'unfranked' which are those shares of company profit paid by an Australian resident company from profits on which Australian company tax has not been paid.

Dwelling

Defined as a suite of rooms contained within a building which are self-contained and intended for long-term residential use. To be self-contained the suite of rooms must possess cooking and bathing facilities as building fixtures. Examples of types of dwelling include: separate house; semi-detached, row or terrace house or townhouse; flat, unit, or apartment; and other dwelling, including caravan, cabin, houseboat, and house or flat attached to a shop.

Dwelling structure

The dwelling structure type is determined by the structure of the building that contains the dwelling. Households belong to one of four dwelling categories:

- separate house
- semi-detached, row or terrace house or townhouse
- flat, unit, or apartment and
- other dwelling, including caravan or cabin in a caravan park, houseboat in a marina, caravan not in a caravan park, houseboat not in a marina and house or flat attached to a shop.

Earners

Persons (excluding dependent children) who receive income from wages or salaries, who are engaged in their own business or partnership, or are silent partners in a business or partnership.

Education benefits

Social transfers in kind relating to the provision of school, tertiary and other education.

Electricity concessions

Includes social transfers in kind relating to electricity concessions and rebates.

Employed

Persons aged 15 years and over who, during the week before the interview:

- worked one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (includes employees, employers and own account workers)
- worked one hour or more, without pay, in a family business or on a family farm
- had a job, business or farm but was not at work because of holidays, sickness or other reason.

Employee

An employed person who, for most of his/her working hours:

- works for a public or private employer and receives remuneration in wages or salary, or is paid a retainer fee by his/her employer and works on a commission basis, or works for an employer for tips, piece-rates or payment in kind
- operates their own incorporated enterprise with or without employees.

Employee income

An employee's total remuneration, whether monetary or in kind, received as a return to labour from an employer or from a person's own incorporated business. It comprises wages and salaries, bonuses, amounts salary sacrificed, non-cash benefits such as the use of motor vehicles and subsidised housing, and termination payments.

Employer

A person who operates his or her own unincorporated business or engages independently in a profession or trade, and hires one or more employees.

Energy Supplement

A tax-exempt, indexed payment paid to pensioners, other income support recipients, families receiving Family Tax Benefit payments and Seniors Supplement recipients, provided they meet eligibility requirements.

Equity in the dwelling

A household's equity in the dwelling is the difference between the value of the dwelling and the total amount outstanding on mortgages taken out on the dwelling for any purpose, or unsecured loans taken out for housing purposes.

Equivalisation

Can be applied to disposable household income and net worth to create equivalised disposable household income and equivalised household net worth. Adjustments are made using an equivalence scale. Equivalence measures are used in some analyses to enable comparison of the relative economic wellbeing of households of different size and composition. For a lone person household, the equivalised value is equal to the original value, or equal to zero if the original value was negative. For a household comprising more than one person, it is an indicator of the level that would be needed by a lone person household to enjoy the same level of economic wellbeing as the household in question.

Equivalising factor

A factor that can be used to adjust the actual incomes of households in a way that enables analysis of the relative wellbeing of households of different size and composition. The equivalising factor included on the file has been calculated using the 'modified OECD' equivalence scale. The factor is built up by allocating points to each person in a household. Taking the first adult in the household as having a weight of 1 point, each additional person who is 15 years or older is allocated 0.5 points, and each child under the age of 15 is allocated 0.3 points. The equivalence factor is the sum of the equivalence points allocated to the household members. Equivalised household income can

be derived by dividing total household income by the equivalence factor. Note that for large households, the equivalence factors included on the CURF file are based on the household size after it has been reduced to the maximum size allowable on each CURF.

Equivalised disposable household income

Disposable household income adjusted using an equivalence scale. For a lone person household it is equal to disposable household income. For a household comprising more than one person, it is an indicator of the disposable household income that would need to be received by a lone person household to enjoy the same level of economic wellbeing as the household in question.

Expenditure

The cost of goods and services acquired during the reference period for private use, whether or not the goods were paid for or consumed. Expenditure is net of refunds. For example, payments for health services are net of any refunds received or expected to be received. Expenditure is classified according to the Household Expenditure Classification which contains over 600 detailed items.

Family

Two or more people, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who usually live in the same household. A separate family is formed for each married couple, or for each set of parent-child relationships where only one parent is present.

Family composition of household

Classifies households into three broad groupings based on the number of families present (one family, multiple family and non-family). One family households are further disaggregated according to the type of family (such as couple family or one-parent family) and according to whether or not dependent children are present. Non-family households are disaggregated into lone person households and group households.

Family day care

A type of formal child care provided by experienced caregivers in their own homes, available for a full day or part day. Schemes are administered and supported by central coordination units.

Family support payments

Households that receive income from Baby Bonus, Newborn Supplement, Paid Parental Leave, Dad and Partner Pay, Family Tax Benefits, Parenting Payments or Schoolkids bonus.

Family Tax Benefit (FTB)

Includes Family Tax Benefit (both Part A and Part B) payments received fortnightly, as well as additional cash allowances such as rent assistance. It also includes one-off payments to families.

Financial assets

An asset whose value arises not from its physical existence (as would a building, piece of land, or capital equipment) but from a contractual relationship. Financial assets are mostly financial claims (with the exception of shares and value of own unincorporated business). Financial claims entitle the owner to receive a payment, or a series of payments, from an institutional unit to which the owner has provided funds. Examples include accounts held with financial institutions (including offset accounts), ownership of an incorporated business, shares, debentures and bonds, trusts, superannuation funds, and loans to other persons.

Financial stress

A range of items which provide a subjective measure of the household's economic wellbeing. One person in each household was asked to provide assessments of the current household's circumstances. This person was randomly chosen from the reference person and spouse. Items include management of household income, present standard of living compared with two years ago, ability to raise emergency money, and a range of cash flow problems.

First home buyer

A household which bought their dwelling in the three years prior to being interviewed, and neither the reference person nor their co-resident partner had owned or been purchasing a home previously.

First Home Owners Grant

The First Home Owners Grant is a scheme established by the Australian Government to provide financial assistance to eligible first home buyers. Its value has varied over time as government policy has changed.

Flat, unit or apartment

Includes all self-contained dwellings in blocks of flats, units or apartments. These dwellings do not have their own private grounds and usually share a common entrance foyer or stairwell. This category includes houses converted into flats and flats attached to houses such as granny flats. A house with a granny flat attached is regarded as a separate house.

Formal child care

Regulated child care away from the child's home. The main types of formal care are before and/or after school care, long day care, family day care, occasional care and vacation care.

Full-time employed

Employed persons who usually work 35 hours or more a week (in all jobs).

Full-time student

A person 15 years or over who is classified as a full-time student by the institution they attend, or considers himself/herself to be a full-time student. Full-time study does not preclude employment.

Gini coefficient

A summary measure of inequality of income distribution. For more information see the 'Summary indicators of income and wealth distribution' section of this publication.

Government pensions and allowances

Income support payments from government to persons under social security and related government programs. Included are pensions and allowances received by aged, disabled, unemployed and sick persons, families and children, veterans or their survivors, and study allowances for students. All overseas pensions and benefits are included here, although some may not be paid by overseas governments.

Gross imputed rent

The estimated market rent that a dwelling would attract if it were to be commercially rented.

Gross income

Income from all sources, whether monetary or in kind, before income tax, the Medicare levy and the Medicare levy surcharge are deducted.

Group household

See Non-family household.

Greater Capital City Statistical Area Structure

Greater Capital City Statistical Areas (GCCSAs) represent the socio-economic extent of each of the eight state and territory capital cities. They include the people who regularly socialise, shop or work within the city, but live in the small towns and rural areas surrounding the city.

Guaranteed pensions

Comprise pensions which are guaranteed to provide a regular income stream for the life of the recipient or for the reversionary beneficiary's life on the death of the member. The most common are defined benefit pensions which are calculated based on a predetermined formula which varies in different funds. Common criteria used include: average salary before retirement, retirement age and years of employment.

Health benefits

Health benefits are social transfers in kind relating to acute care institutions, community health services, pharmaceuticals, Private Health Insurance Rebate and other health benefits.

Household

A person living alone or a group of related or unrelated people who usually live in the same private dwelling.

Household Expenditure Classification (HEC)

The expenditure classification used in the Household Expenditure Survey. In the 2015-16 survey it consists of over 600 items at the most detailed level. At the broadest level it consists of 20 broad expenditure groups. All broad groups are presented in this publication. A copy of the classification will be included in the downloads tab of the 2015-16 User Guide.

Household questionnaire

Used to collect information on household characteristics, housing costs and household assets and liabilities.

Household reference person

The reference person for each household is chosen by applying, to all household members aged 15 years and over, the selection criteria below, in the order listed, until a single appropriate reference person is identified:

- the person with the highest tenure when ranked as follows: owner without a mortgage, owner with a mortgage, renter, other tenure
- one of the partners in a registered or de facto marriage, with dependent children
- one of the partners in a registered or de facto marriage, without dependent children
- a lone parent with dependent children
- the person with the highest income
- the eldest person.

Housing benefits

Social transfers in kind from the provision of government housing at subsidised rental rates.

Housing costs

Housing costs for the purposes of the publication Housing Occupancy and Costs, Australia (cat. no. 4130.0), comprise the following costs for the three different tenure type categories:

- rent payments
- rates payments (general and water)
- mortgage or unsecured loan payments if the initial purpose was primarily to buy, build, add to, or alter the dwelling.

Some additional items relating to housing costs are available to enable alternative estimates of housing costs to be constructed. See the data item list available in the downloads tab of this publication in late 2017.

Housing costs as a proportion of income

The total weekly housing costs of a group (e.g. one parent households) are divided by the total weekly income of that group expressed as a percentage.

Housing utilisation

Provides a measure of the bedroom requirements of a household according to household size and composition. See Canadian National Occupancy Standard for housing appropriateness.

Imputed rent

See Net imputed rent and Gross imputed rent.

Income

Income consists of all current receipts, whether monetary or in kind, that are received by the household or by individual members of the household, and which are available for, or intended to support, current consumption. Income includes receipts from:

- wages and salaries and other receipts from employment (whether from an employer or own incorporated enterprise), including income provided as part of salary sacrificed and/or salary package arrangements
- profit/loss from own unincorporated business (including partnerships)
- net investment income (interest, rent, dividends, royalties)
- government pensions and allowances (includes pensions and allowances from Commonwealth and State and Territory governments as well as pensions from overseas)
- private transfers (e.g. superannuation, workers' compensation, income from annuities, child support, and financial support received from family members not living in the same household).

Gross income is the sum of the income from all these sources before income tax, the Medicare levy and the Medicare levy surcharge are deducted. Other measures of income are Disposable income and Equivalised disposable household income.

Note that child support and other transfers from other households are not deducted from the incomes of the households making the transfers.

Income tax

See Taxes on income.

Income unit

One person or a group of related persons within a household, whose command over income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples, and between parents and dependent children.

Income unit reference person

The male partner in a couple income unit, the parent in a one parent income unit and the person in a one person income unit.

Incorporated business

An incorporated business is a company that has a registered business name with the Australian Securities and Investments Commission (ASIC) and Australian Business Register (ABR), and a legal status which is separate to that of the individual owners of the business.

Individual questionnaire

Used to collect information from each person aged 15 years and over on individual details such as income, personal assets, education and labour force status.

Industry

Coded for all employed people aged 15 years and over, using the Australian and New Zealand Standard Industrial Classification (ANZSIC).

Informal child care

Non-regulated child care, arranged by a child's parent/guardian, either in the child's home or elsewhere. It comprises care by (step) brothers or sister, care by grandparents, care by other relatives (including a parent living elsewhere) and care by other (unrelated) people such as friends, neighbours, nannies or babysitters. It may be paid or unpaid.

Investment income

Income received as a result of ownership of assets. It comprises returns from financial assets (interest, dividends), and from non-financial assets (rent and royalties).

Investment loan

A loan taken out for the purpose of financing investment, excluding loans for business purposes and rental property.

Labour force status

Classifies all people aged 15 years and over according to whether they were employed, unemployed or not in the labour force.

Landlord type

For renters, the type of entity to whom rent is paid or with whom the tenure contract or arrangement is made. Renters are classified to one of the following categories:

- state/territory housing authority-where the household pays rent to a state or territory housing authority or trust
- private landlords-where the household pays rent to a real estate agent or to another person not in the same household
- person in the same household-where the unit pays rent to a person who resides in the same household
- other-where the household pays rent to the owner/manager of a caravan park, an employer (including a government authority), a housing cooperative, a community or church group, or any other body not included elsewhere.

Liability

A liability is an obligation which requires one unit (the debtor) to make a payment or a series of payments to the other unit (the creditor) in certain circumstances specified in a contract between them.

Life tenure

A lease arrangement in which the tenant has the right to occupy the dwelling for an indefinite or unspecified period.

Loan

A form of liability that is created when creditors lend funds directly to debtors. Examples include an overdraft from a bank, money lent by a building society with a mortgage over a property as collateral, and personal loans.

Loans for owner occupied dwelling

Principal outstanding on loans used to purchase, build, alter, or make additions to the selected dwelling. Includes money borrowed for a deposit on the selected dwelling, and bridging finance taken out until such time as a loan or mortgage is obtained or the dwelling is bought outright. Where only a proportion of a loan is used for the owner occupied dwelling, only that proportion of the principal outstanding is included.

Lone person household

See Non-family household.

Long day care centre

A type of formal child care that is centre-based and is available to children between birth and school age for the full day or part day. Centres are usually open for most of the year.

Low Economic Resource Household

People with low economic resources (i.e. low consumption possibilities) are those in households in the lowest two quintiles (i.e. 40%) of both equivalised disposable household income and equivalised household net worth.

Low income

Low income households are defined as households in the lowest equivalised disposable household income quintile, excluding the 1st and 2nd percentiles (i.e. the 3rd to 20th percentiles inclusive). The 1st and 2nd percentiles are excluded due to the high wealth and expenditure characteristics those household exhibit, and the prevalence of income types other than employee income and government pensions and allowances.

Lower income

Lower income households is a measure using in the publication Housing Occupancy and Costs, Australia (cat. no. 4130.0) that is defined as households in the lowest and second equivalised disposable household income quintiles, excluding the 1st and 2nd percentiles (i.e. the 3rd to 40th percentiles inclusive). The 1st and 2nd percentiles are excluded due to the high wealth and expenditure characteristics those household exhibit, and the prevalence of income types other than employee income and government pensions and allowances.

Main source of income

The income source from which the most positive income is received. If total income is nil or negative the main source is undefined. As there are several possible sources, the main source may account for less than 50% of gross income.

Mean expenditure

The total expenditure by a group of units divided by the number of units in the group. For more detail about household weighted and person weighted means, see the 'Summary Indicators of Income and Wealth' section of this publication for more information.

Mean housing costs

The total weekly housing costs paid by a group of households (e.g. couple only households) divided by the number of households in that group.

Mean income

The total income received by a group of units divided by the number of units in the group. For more detail about household weighted and person weighted means, see the 'Summary indicators of income and wealth distribution' section of this publication for more information.

Mean net worth

The total or aggregate net worth of a group of units, divided by the number of units in the group. In this publication, the most common unit is the household.

Median housing costs

That level of weekly housing costs that divides a group of households into two equal parts, one half having housing costs above the median and the other half having housing costs below the median. Households with nil or negative total income are not included in this calculation.

Median income

That level of income which divides the units in a group into two equal parts, one half having incomes above the median and the other half having incomes below the median. For more detail about household weighted and person weighted medians, see the 'Summary indicators of income distribution' section of this publication for more information.

Median net worth

That level of net worth which divides the units in a group into two equal parts, one half having net worth above the median and the other half having net worth below the median.

Median ratio of housing costs to income

The ratio of weekly housing costs to gross weekly income is calculated for each household. The median is the level of that ratio that divides a group of households into two equal parts, one half having the ratio above the median and the other half having the ratio below the median.

Medicare levy

Medicare is Australia's universal health care system. The Medicare levy is a specific tax, based on individual income, intended to assist in the funding of this system.

Medicare levy surcharge

The Medicare levy surcharge is a levy, or an additional tax, on Australian taxpayers who do not have an appropriate level of private hospital insurance and who are earning more than the specified income threshold.

Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA)

The Metropolitan Accessibility/Remoteness Index of Australia (Metro ARIA) is a geographic index of service accessibility in metropolitan areas developed by the Hugo Centre for Migration and Population Research, University of Adelaide. The index reflects the ease or difficulty people face accessing basic services within metropolitan areas, derived from the measurement of road distances people travel to reach different services. Further information regarding Metro ARIA and maps can be found via the following link: <http://aurin.org.au/projects/data-hubs/metro-aria/>

Mortgage

A mortgage is a loan taken out using the usual residence as security. An owner with a mortgage must still owe money from such a loan.

Multiple family household

A household containing two or more families. Unrelated individuals may also be present.

Negative expenditure

Expenditure may be negative if a household's receipts for a good or service (e.g. refunds, trade-ins, sales or successful insurance claims), over a specific period, exceeds the cost of acquisitions. For example, if a household sold a car in the previous 12 months and did not buy a replacement car or they bought a less expensive car, this household would report negative expenditure on cars

Negative income

Income may be negative when a loss accrues to a household as an owner or partner in unincorporated businesses, rental properties or other investment income. Losses occur when operating expenses and depreciation are greater than gross receipts.

Negative net worth

Net worth may be negative when household liabilities exceed household assets.

Net imputed rent

Gross imputed rent less housing costs. Net imputed rent is an estimate of the value of housing services that households receive from home ownership or by households paying subsidised rent or occupying their dwelling rent free. Housing costs for the purpose of calculating net imputed rent for owner-occupiers comprise:

- rates payments (general and water)
- body corporate fees
- the interest component of repayments of loans that were obtained for the purposes of purchasing or building
- rent payments
- house insurance costs
- repair and maintenance costs.

Net imputed rent from subsidised public rentals is included as a social transfer in kind for housing.

Net worth

Net worth is the value of a household's assets less the value of its liabilities. Net worth may be negative when household liabilities exceed household assets.

New dwelling

A dwelling is new if it was built under contract for the current owner, or was purchased from the builder/developer, and the current owners were the first household to live in the dwelling.

Non-dependent children

Persons aged 15 years and over who:

- do not have a spouse or offspring of their own in the household
- have a parent in the household
- are not full-time students aged 15–24 years.

Non-family household

A household that consists of unrelated persons only. Non-family households are classified to one of the following categories:

- Group household: a household consisting of two or more unrelated persons where all persons are aged 15 years and over. There are no reported couple relationships, parent-child relationships or other blood relationships in these households.
- Lone person household: a household consisting of a person living alone.

Non-financial assets

Non-financial assets are all assets other than financial assets. Examples include residential and non-residential property, household contents and vehicles.

Not in the labour force

Persons not in the categories employed or unemployed as defined.

Occasional care

A type of formal child care provided mainly for children who have not started school. These services cater mainly for the needs of families who require short term care for their children.

Occupation

Coded for all employed persons aged 15 years and over, using the Australian and New Zealand Standard Classification of Occupation (ANZSCO) (cat. no. 1220.0).

Offset accounts

An offset account is an account with a financial institution that is linked to a home loan. The balance in offset accounts reduces the interest charged on the loan.

One family household

A one family household is classified to one of the following categories:

- couple only - two persons in a registered or de facto marriage, who usually live in the same household
- couple family with dependent children - a household consisting of a couple with at least one dependent child. The household may also include non-dependent children, other relatives and unrelated individuals
- one parent family with dependent children - a household comprising a lone parent with at least one dependent child. The household may also include non-dependent children, other relatives and unrelated individuals
- other one family households: a household comprising:
 - one couple with their non-dependent children only
 - one couple, with or without non-dependent children, plus other relatives
 - one couple, with or without non-dependent children or other relatives, plus unrelated individuals
 - a lone parent with his/her non-dependent children, with or without other relatives and unrelated individuals
 - two or more related individuals where the relationship is not a couple relationship or a parent-child relationship (e.g. two brothers).

One parent family with dependent children

See One family household.

One parent, one family household

A one family household comprising a lone parent with at least one dependent or non-dependent child. The household may also include other relatives and unrelated individuals.

Other dwelling

Includes caravans, houseboats, or houses or flats attached to a shop or other commercial premise.

Other education benefits

Social transfers in kind relating to special education (e.g. education for children who have physical disabilities) and other education benefits which could not be assigned to school or tertiary education. Other education benefits is a component of education benefits.

Other formal child care

A type of formal child care other than before and/or after school care, long day care, family day care, occasional care and vacation care.

Other health benefits

Includes social transfers in kind relating to public health services such as health promotion campaigns, occupational health and safety programs, food standards regulation, immunisation programs, breast cancer screening and screening for childhood diseases, as well as expenditure on health research. Other health benefits is a component of health benefits.

Other income

Income other than wages and salaries, own unincorporated business income and government pensions and allowances. This includes income received as a result of ownership of financial assets (interest, dividends), and of non-financial assets (rent, royalties) and other current receipts from sources such as superannuation, child support, workers' compensation and scholarships. Income from rent is net of operating expenses and depreciation and may be negative when these are greater than gross receipts.

Other source of deposit

Other sources of deposit include state/territory government grants, contributions from employers, loans from informal sources that are not family or friends, other loans, sale of car or other assets, and inheritance.

Other source of monetary assistance

Other sources of monetary assistance include state/territory government grants, contributions from employers, sale of car or other assets, and inheritance.

Other landlord type

Where the household pays rent to the owner/manager of a caravan park, an employer (including a government authority), a housing cooperative, a community or church group, or any other body not included elsewhere.

Other one family households

See One family households.

Other payments

Households that receive income from other government pensions and allowances. These include overseas pensions and benefits, partner allowance, sickness allowance, special benefit, war widow pension (DVA), widow allowance, wife pensions, seniors supplement, and other government pensions and allowances.

Other private income

Private income other than employee income, government pensions and allowance and income from own business. It includes superannuation, workers' compensation, child support and any other allowances regularly received as well as interest and property rent.

Other property loans

Principal outstanding on loans used to purchase, build, alter, or make additions to property rented out, loans taken out by people in rental properties who are buying or building a home somewhere else, and loans taken out for alterations and additions to other property. Where only a proportion of a loan is used for the property, only that proportion of the principal outstanding is included.

Other tenure type

A household which is not an owner (with or without a mortgage), or a renter. Includes rent free.

Own account worker

A person who operates his or her own unincorporated business or engages independently in a profession or trade and hires no employees.

Own unincorporated business income

The profit/loss that accrues to persons as owners of, or partners in, unincorporated businesses. Profit/loss consists of the value of gross output of the business after the deduction of operating expenses (including depreciation). Losses occur when operating expenses are greater than gross receipts and are treated as negative income.

Owner (of dwelling)

A household in which at least one member owns the dwelling in which the household members usually reside. Owners are divided into two categories: owners without a mortgage and owners with a mortgage. If there is any outstanding mortgage or loan secured against the dwelling the household is an owner with a mortgage. If there is no mortgage or loan secured against the dwelling the household is an owner without a mortgage.

Part-time employed

An employed person who usually works less than 35 hours per week.

Percentiles

When all households or persons in the population are ranked from the lowest to the highest on the basis of some characteristic such as their household income, they can then be divided into equal sized groups. Division into 100 groups gives percentiles. The highest value of the characteristic in the tenth percentile is denoted P10. The median or the top of the 50th percentile is denoted P50. P20, P80 and P90 denote the highest values in the 20th, 80th and 90th percentiles. Ratios of values at the top of selected percentiles, such as P90/P10, are often called percentile ratios.

Percentile ratios

Percentile ratios summarise the relative distance between two points in a distribution. To illustrate the full spread of the income distribution, the percentile ratio needs to refer to points near the extremes of the distribution, for example, the P90/P10 ratio. The P80/P20 ratio better illustrates the magnitude of the range within which the income or net worth of the majority of households falls. The P80/P50 and P50/P20 ratios focus on comparing the ends of the income distribution with the midpoint.

Perturbation

Adjustment of estimates to disguise individual values without affecting the statistical validity of aggregate data.

Pharmaceutical benefits

Includes social transfers in kind relating to pharmaceuticals provided outside of hospitals, aids and appliances used for health purposes and supplied in an ambulatory setting, glasses, hearing aids, wheel chairs, etc. Pharmaceutical benefits is a component of health benefits.

Preschool

Educational and developmental programs for children in the year (or in some jurisdictions, two years) before they

begin full-time primary education.

Previous financial year exclusion flag

This item is available on the file to indicate records that could be regarded as out of scope when analysing previous year income data. For more information see the data item list in the downloads tab of this publication (from late 2017).

Previous financial year income

Income earned in the period July 2012 to June 2013.

Private dwelling

Houses, flats, home units, caravans, garages, tents and other structures that are used as places of residence. These are distinct from special dwellings which include hotels, boarding houses and institutions.

Private Health Insurance Rebate

Includes social transfers in kind relating to a rebate on private health insurance costs for members of a registered health fund. Private Health Insurance Rebate is a component of health benefits.

Private income

Current receipts from private organisations and other households, including wages and salaries, income from own business, superannuation, workers' compensation, income from annuities, interest, dividends, royalties, income from rental properties, scholarships and child support.

Private renter

A household paying rent to a landlord who is a real estate agent, a parent or other relative not in the same unit or another person not in the same unit.

Private trusts

Trusts other than public unit trusts. These include private unit trusts, fixed unit trusts, family trusts, charitable trusts and testamentary trusts.

Property

All residential and non-residential properties owned by persons in the household, excluding properties owned by the respondent's business.

Public renter

A household paying rent to a state or territory housing authority/trust.

Public unit trusts

A trust which issues units to the general public within Australia for the purpose of investing the pooled monies. A public unit trust must have registered a prospectus with the Australian Securities and Investments Commission (ASIC) and be governed by a trust deed between its management company and a trustee company. The units may or may not be listed on the Australian Stock Exchange. Includes property trusts, equity trusts, mortgage trusts, cash management trusts and public trading trusts.

Quintiles

Groupings that result from ranking all households or people in the population in ascending order according to some characteristic such as their household income or net worth and then dividing the population into five equal groups, each comprising 20% of the estimated population.

Ratio at top of selected percentiles

See Percentiles.

Recent home buyer

A household which bought their dwelling in the three years prior to the survey.

Recent mover

A household in which the reference changed their residence in the five years prior to being interviewed.

Reference person

See Household reference person and Income unit reference person.

Relative standard error (RSE)

The standard error expressed as a percentage of the estimate for which it was calculated. It is a measure which is independent of both the size of the sample, and the unit of measurement and as a result, can be used to compare the reliability of different estimates. The smaller an estimate's RSE, the more likely it is that the estimate is a good proxy for that which would have been obtained if the whole population had been surveyed.

Repairs and maintenance

Repairs and maintenance refers to any work undertaken with the purpose of either preventing deterioration or repairing some aspect of the dwelling back to its original condition.

Renter

A household that pays rent to reside in the dwelling. See 'Landlord type' for further classification.

Rent free

Rent free is a tenure arrangement where the unit (i.e. household, income unit or person) exchanges no money for lodging and is not an owner of the dwelling.

Rest of State

Under the Australian Statistical Geography Standard (ASGS), Rest of State is any area not defined as being part of the Greater Capital City Statistical Areas (GCCSAs). In the case of Australian Capital Territory and Northern Territory however, there is no Rest of State balance.

Salary packaging

An arrangement for the employer to remunerate the employee with a combination of cash wages and salaries and one or more non-cash benefits, to the value of the employee's total remuneration.

Salary sacrifice

An arrangement under which an employee agrees contractually to forgo part of the remuneration, which the employee would otherwise receive as wages and salaries, in return for the employer or someone associated with the employer providing benefits of a similar value.

Schoolkids bonus

A biannual payment, paid in January and July from January 2013 to the end of 2016, to eligible families, carers and students to assist with education related costs of primary and secondary school students. The Schoolkids Bonus replaced the Education Tax Refund.

School education benefits

Social transfers in kind relating to administration, inspection, support and operation of educational programs for preschool, primary and secondary school students. Government expenditure on the administration, inspection, support and operation of transportation services to students were included. Government expenditure on school medical and dental programs (which are included in other health benefits) and monetary transfers to households were excluded. School education is a component of education benefits.

Selected dwelling

The private dwelling selected in the sample for the survey.

Selected superannuation contributions for employees

Selected superannuation contributions comprise:

- The compulsory employer contributions required under the Superannuation Guarantee. These values have been imputed as the minimum amount that employers must contribute to employees' superannuation accounts (9.25% in 2013-14). Where possible, employee income that is not covered by this legislation (such as overtime) has been excluded.
- Income salary sacrificed by employees into a superannuation account.
- Superannuation contributions from employers above the minimum compulsory payments.

After tax contributions by employees are not included.

Semi-detached, row or terrace house or townhouse

A dwelling with its own private grounds and no dwelling above or below. A key feature of this dwelling is that it is either attached in some structural way to one or more dwellings or is separated from neighbouring dwellings (usually by less than one-half metre). Examples include semi-detached, row or terrace houses, townhouses or villa units. Multistorey townhouses or units are separately identified from those which are single storey.

Separate house

A dwelling which is self-contained and separated from other houses (or other buildings or structures) by a space to allow access on all sides (usually at least one-half metre). This category also includes houses that have an attached flat (e.g. a granny flat). The attached flat will be included in the flat, unit or apartment category.

Shares

A share is a contract between the issuing company and the owner of the share which gives the latter an interest in the management of the corporation and the right to participate in profits. The "value of shares" excludes the value of shares held by individuals in their own incorporated business. Such shares are included in "value of own incorporated business".

Significant person

Significant persons are defined as follows:

- all members of lone person or couple only households
- all parents in a couple with children household or a single parent household
- the person aged 15 years or over in a group household where one person is aged 15 years or over and the other members of the household are less than 15 years old
- 50% of the persons aged 15 years and over in all other households.

Silent partner

Is a person who has some share or legal ownership in a business but who does not actively 'work' in that business.

Social assistance benefits in cash

Cash payments to persons from general government without any requirement to provide goods and services in return. Included are pensions and allowances received by aged, disabled, unemployed and sick persons, families and children, veterans or their survivors, and study allowances for students. Family Tax Benefit, Baby Bonus and Child Disability Assistance Payment paid to recipients of Carer Allowance are also included in social assistance benefits in cash. Household social assistance benefits in cash are the sum of all household members' cash payments. The only difference between 'government pensions and allowances' and 'social assistance benefits in cash' is that overseas pensions are included in government pensions and allowances and private income and excluded from social assistance benefits in cash.

Social transfers in kind

Non-cash benefits and services provided by the government to households for education, health, housing, social security and welfare, and electricity concessions and rebates. It includes reimbursements of approved expenditures such as the Medicare rebate, the Private Health Insurance Rebate, the Child Care Benefit and the Child Care Rebate. The cost of administering the provision of social assistance benefits in cash is included.

Standard error (SE)

A measure of the likely difference between estimates obtained in a sample survey and estimates which would have been obtained if the whole population had been surveyed. The magnitude of the standard error associated with any survey is a function of sample design, sample size and population variability.

Statistical Area Level 1 (SA1)

Statistical Areas Level 1 (SA1s) have been designed as the smallest unit for the release of Census data. SA1s generally have a population of 200 to 800 persons, and an average population of about 400 persons. They are built from whole Mesh Blocks and there are approximately 55,000 SA1s covering the whole of Australia.

Statistical Area Level 4 (SA4)

Statistical Areas Level 4 (SA4s) are part of the ASGS and are used for the output of a variety of regional data, including the 2011 Census Data. There are 106 SA4s covering the whole of Australia without gaps or overlaps. They are built up from SA1s. In regional areas, SA4s tend to have populations of between 100,000 to 300,000 people. In metropolitan areas, SA4s tend to have larger populations (300,000 – 500,000 people).

State/territory government concessions and exemptions

Any exemption or concession for first home buyers on stamp (transfer) duty and/or mortgage duty payable to a state or territory government. All jurisdictions offered exemptions and/or concessions on stamp duty and/or mortgage duty to first home buyers in the survey period, normally subject to property value and income thresholds.

State/territory government grants

Any monetary grant paid to eligible first home buyers that is in addition to the First Home Owner Grant and introduced by a state or territory government. Some jurisdictions offered grants to first home buyers in the survey period.

Study loans

Study loans are debts incurred under Higher Education Loans Program (HELP), the government education payment scheme, and other government higher education schemes. They also include loans incurred prior to 2005 under the Higher Education Contribution Scheme (HECS) and the Student Financial Supplement Scheme (SFSS). A feature of these loans is that the obligation to repay them only exists when the student's income exceeds a threshold. The debt is also extinguished upon death. The HELP scheme includes several education payment schemes, including HECS-HELP and FEE-HELP. Study loans also includes student loans from other countries.

Superannuation

A long-term savings arrangement which operates primarily to provide income for retirement.

Superannuation/annuity income

Income from superannuation, annuities and private pensions such as allocated pensions.

Superannuation coverage

Persons aged 15 years and over were considered to have superannuation coverage if they:

- had a superannuation balance above zero,
- were receiving regular income from superannuation, or
- had received a lump sum superannuation payment in the last two years.

Taxes on income

Taxes on income is the sum of personal income tax plus the Medicare levy and Medicare levy surcharge for all members of the household. Taxes on income were imputed according to the 2015–16 tax rules which were applied to the gross income of family members according to their characteristics as reported in the 2015–16 Survey of Income and Housing.

Tenure type

The nature of a household's legal right to occupy the dwelling in which the household members usually reside. Tenure is determined according to whether the household owns the dwelling outright, owns the dwelling but has a mortgage or loan secured against it, is paying rent to live in the dwelling, or has some other arrangement to occupy the dwelling.

Term annuities

Term annuities are a fixed-term product that gives people a guaranteed income for a specified term. This involves a series of payments purchased with a lump sum, usually from an insurance company.

Tertiary education benefits

Social transfers in kind relating to the administration, inspection, operation and support of education programs at higher education institutions and colleges of technical and further education. Tertiary education is a component of education benefits.

Topcoding

Reduction of all high values to a specified maximum value.

Trusts

Any type of managed fund which involves the pooling of investors' money in order for a trustee or professional manager to administer that fund. Examples include listed and unlisted public unit trusts, cash management trusts, property trusts and family trusts used only for investment purposes.

Unemployed

Persons aged 15 years and over who were not employed during the week before the interview and had actively looked for full-time or part-time work at any time in the four weeks before the interview and:

- were available for work in the week before the interview,
- were waiting to start a new job within four weeks from the interview and would have started in the week before the interview if the job had been available then.

Unemployment and study payments

Households that receive income from Austudy/ABSTUDY, Newstart allowance or Youth allowance.

Unincorporated business

A business in which the owner(s) and the business are the same legal entity, so that, for example, the owner(s) are personally liable for any business debts that are incurred. The business may be registered (in their own state) as a sole trader, partnership or firm; however they are not registered with the Australian Securities and Investments Commission and are not legally a company.

Unsecured loan

A loan not requiring any security or collateral.

Vacation care

A formal child care service provided to school children during the school holidays.

Value of dwelling

The estimated value of the dwelling and its land, as estimated and reported by the respondent. The data are only collected for owners.

Vehicles

Vehicles include registered and unregistered vehicles used for private purposes including cars, trucks, buses, motorcycles, caravans, aircraft, boats and bicycles.

Vehicle loans

Principal outstanding on loans used to purchase motor vehicles. Where only a proportion of a loan is used to purchase a vehicle, only that proportion of the principal outstanding is included.

Wealth

See Net worth.

Worker's compensation payment

Monies paid by insurance companies and sometimes by employers as compensation for loss of earnings while unable to attend work due to an illness or injury. It can also be paid as compensation for an injury itself that was caused by an accident or injury at work.

Year of arrival in Australia

The year a person (born outside Australia) first arrived in Australia from another country, with the intention of staying in Australia for one year or more.

Abbreviations

ABBREVIATIONS

\$	dollars
'000	thousand
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ARIA	Accessibility/Remoteness Index of Australia
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
ASNA	Australian System of National Accounts
ATO	Australian Taxation Office
Aust.	Australia
CAI	computer assisted interviewing
cat. no.	catalogue number
CATI	Computer assisted telephone interviewing
CAPI	Computer assisted personal interviewing
CCB	Child Care Benefit
CCR	Child Care Rebate (formerly known as Child Care Tax Rebate: CCTR)
CNOS	Canadian National Occupancy Standard
COAG	Council of Australian Governments
COICOP	Classification of Individual Consumption According to Purpose
CPI	Consumer Price Index
CRA	Commonwealth Rent Assistance
CURF	confidentialised unit record file
DVA	Department of Veterans' Affairs (Australian Government)
excl.	excluding
EDHI	Equivalised Disposable Household Income
ERP	estimated resident population
FBT	Fringe Benefits Tax
FISIM	financial intermediation services indirectly measured
FTB	Family Tax Benefit
GFC	global financial crisis
GFS	Government Finance Statistics
GMI	gross mixed income
GOS	gross operating surplus
GST	goods and services tax
HEC	Household Expenditure Classification
HECS	Higher Education Contribution Scheme
HELP	Higher Education Loan Program
HES	Household Expenditure Survey
HH	household
IU	income unit
LER	Low Economic Resource measure
nec	not elsewhere classified
nfd	not further defined
no.	number

NPISH	non-profit institutions serving households
NSW	New South Wales
NT	Northern Territory
OECD	Organisation for Economic Co-operation and Development
PAYG	pay-as-you-go tax
PBLCI	Pensioner and Beneficiary Living Cost Index
PHIR	Private Health Insurance Rebate
PPL	paid parental leave
Qld	Queensland
RBA	Reserve Bank of Australia
RSE	relative standard error
SA	South Australia
SA1	Statistical Area Level 1
SA4	Statistical Area Level 4
SE	standard error
SEIFA	Socio-Economic Indexes for Areas
SIH	Survey of Income and Housing
STIK	social transfers in kind
Tas.	Tasmania
Vic.	Victoria
WA	Western Australia

Changes to processing of Government payments data items in 2015-16 SIH (Appendix)

APPENDIX 9: CHANGES TO PROCESSING OF GOVERNMENT PAYMENTS DATA ITEMS IN 2015-16 SIH

1. BACKGROUND

Income from government payments was a source of income for more than half (55%) of all Australian households in 2015-16, and the main source of income for almost one in four (24%) households.

While the Survey of Income and Housing (SIH) and Household Expenditure Survey (HES) aims to collect comprehensive information about income from all sources, some small or irregular government payments can be difficult for survey respondents to recall. Additionally, households who receive multiple payments can find it difficult to recall or identify the individual components. For instance, if a household receives a combination of payments, such as parenting payment, family tax benefit and rent assistance, the survey respondent/s may only be able to provide the total amount received. As a result, government payments information collected in the SIH and/or HES requires editing prior to output, to ensure that the data comprehensively and accurately represents cash transfers from government.

To improve editing of this data, a model has been implemented which estimates the amount of each payment type that each person in the survey is eligible to receive. This model has replaced previous manual processes for editing government payments data and for estimating missing data. To measure the impact of the introduction of this model, the model was developed using the previously collected and output 2013-14 collection of the SIH. This allows for a comparison of the new method with previous methods, to assess the statistical impact of the change in methods.

2. METHOD

For the majority of government payments (see list below), the Model calculates a weekly payment amount for each survey respondent (aged 15 years or over), including any contingent allowances and benefits. The rate of payment is based on eligibility information about the individual and their household. These requirements are different for each payment, and include items such as age, social marital status, pension status of their partner, income, and the value of assets. The model draws upon policy information about payment amounts in relation to eligibility criteria and contingent or related payments.

These payments are included in the Model:

- Commonwealth Rent Assistance
- Age pension
- Austudy/Abstudy
- Carer allowance

- Carer payment
- Carer supplement
- Clean energy supplement
- Disability pension (DVA)
- Disability support pension
- Family tax benefit
- Newstart allowance
- Parenting payment (single/partnered)
- Partner allowance
- Pension supplement
- School kids' bonus
- Service pension (DVA)
- Sickness allowance
- Special benefit
- Utilities allowance
- War widow's pension (DVA)
- Widow allowance
- Wife pension
- Youth allowance

The following payments are not included in the Model:

- Senior supplement
- Paid Parental Leave payment
- Other government pensions and allowances
- Baby bonus payment
- Dad and Partner Pay
- Overseas pensions and benefits

The Model improved coverage of payments in reference to the relevant items in the Australian System of National Accounts and improved the accuracy of edited values. The Model also maintained comparability with previous cycles by keeping plausible reported data (the majority of values) and minimising imputation and editing.

Modelled values were included for the following purposes:

- Imputing missing values - when a respondent reported receiving a payment, but was unsure of the value of the payment;
- Replacing very high values - when the reported value was above the overall maximum eligible amount for that payment, after stratifying by social marital status and number of children. The maximum value was used for this group to minimise the difference between the reported and modelled values; and
- Imputing contingent payments – some main income support payments (e.g. Newstart, Parenting Payment-Single, Age Pension) are accompanied by other smaller, and sometimes less regular, payments, such as Family Tax Benefit (Part A/B). If an income support payment was reported, but the contingent payment/s were not, then the modelled amounts for these payments were imputed.

3. FINDINGS

The model was successful in improving coverage and accuracy. The range of values after modelling is more plausible than using previous methods, and the aggregate results are comparable to previous cycles.

The related National Accounts item is 'social assistance benefits', which are compiled from data provided to the Australian Government Department of Finance, and state government Treasuries. The coverage of payment recipients in National Accounts is broader than in the SIH. The SIH does not collect information from people living in non-private dwellings (e.g. aged care homes), or very remote areas of Australia.

To better align with the SIH, an adjustment has also been made to the National Accounts item to remove the Private Health Insurance Rebate and the Child Care Rebate which are treated as social transfers in kind in the SIH. However, adjustments have not been made for the inclusion of some education related payments made to parents to offset the cost of educating their children, or for any one-off or irregular payments made by various state and Commonwealth agencies that are included in National Accounts but unlikely to be captured in the SIH.

TABLE 1 - IMPROVED COHERENCE WITH OTHER MACROECONOMIC INDICATORS, Australian Government Pensions and Allowances, Australia, 2013–14

SIH Item

Australian government pensions and allowances	(\$b)95.5
Published	(\$b)96.4
After modelling is applied	(\$b)95.5
ASNA Item	
Australian government pensions and benefits	(\$b)118.2
Equals: Social assistance benefits	(\$b)126.5
Less: Social assistance benefits treated as STIK in SIH	(\$b)8.3
(a)	
SIH as a percent of ASNA	
Published	80.8%
After modelling is applied	81.6%
Full Imputation	83.0%

(a) Includes the Private Health Insurance Rebate and Child Care Rebate

The influence on summary indicators of the income distribution has been minimal. The Partial Imputation column in Table 2 shows the data following imputation of missing values, very high values and contingent payments, whereas the Full Imputation column shows the survey data using entirely modelled data. No significant difference between the Partial Imputation and published data was noted for key indicators.

TABLE 2 - COHERENCE WITH SIH DATA, Equivalised Disposable Household Income, Australia, 2013–14

		Published 2013-14	Partial Imputation	Full Imputation
MEAN INCOME PER WEEK				
Lowest quintile	\$	375	377	396*
Second quintile	\$	615	615	620
Third quintile	\$	843	843	840
Fourth quintile	\$	1,119	1,121	1,118
Highest quintile	\$	2,037	2,038	2,036
All persons	\$	998	999	1,002
Adjusted lowest income quintile	\$	407	408	428*
INCOME PER WEEK AT TOP OF SELECTED PERCENTILES				
10th (P10)	\$	415	421	436*
20th (P20)	\$	511	508	517
30th (P30)	\$	612	615	619
40th (P40)	\$	728	727	722
50th (P50)	\$	844	844	839
60th (P60)	\$	960	963	956
70th (P70)	\$	1,113	1,114	1,111
80th (P80)	\$	1,308	1,308	1,306
90th (P90)	\$	1,688	1,693	1,690
Gini coefficient	no.	0.333	0.332	0.327

* statistically significant difference in comparison to published results

Table 3 compares the population by main source of income before and after modelling. No significant differences were noted between the Partial Imputation and published data.

Table 3 - MOVEMENT IN CPI POPULATIONS, Proportion of Households (%)

	2013–14	Partial Imputation	Full Imputation
1. Employees	60.8	60.9	61.0
2. Entrepreneurs	4.1	4.1	4.1
3. Age pensioners	12.6	12.5	12.7
4 Other government transfer recipients	11.2	11.3	11.3
5. Self-funded retirees	6.1	6.1	6.0
6. Other	5.1	5.0	4.9

Using the modelled data for missing and high values leaves the majority of values unchanged from the amount reported by respondents. The graph below demonstrates the differences for the Age Pension data, showing the

relationship between the published data from 2013-14 and the partially modelled data.

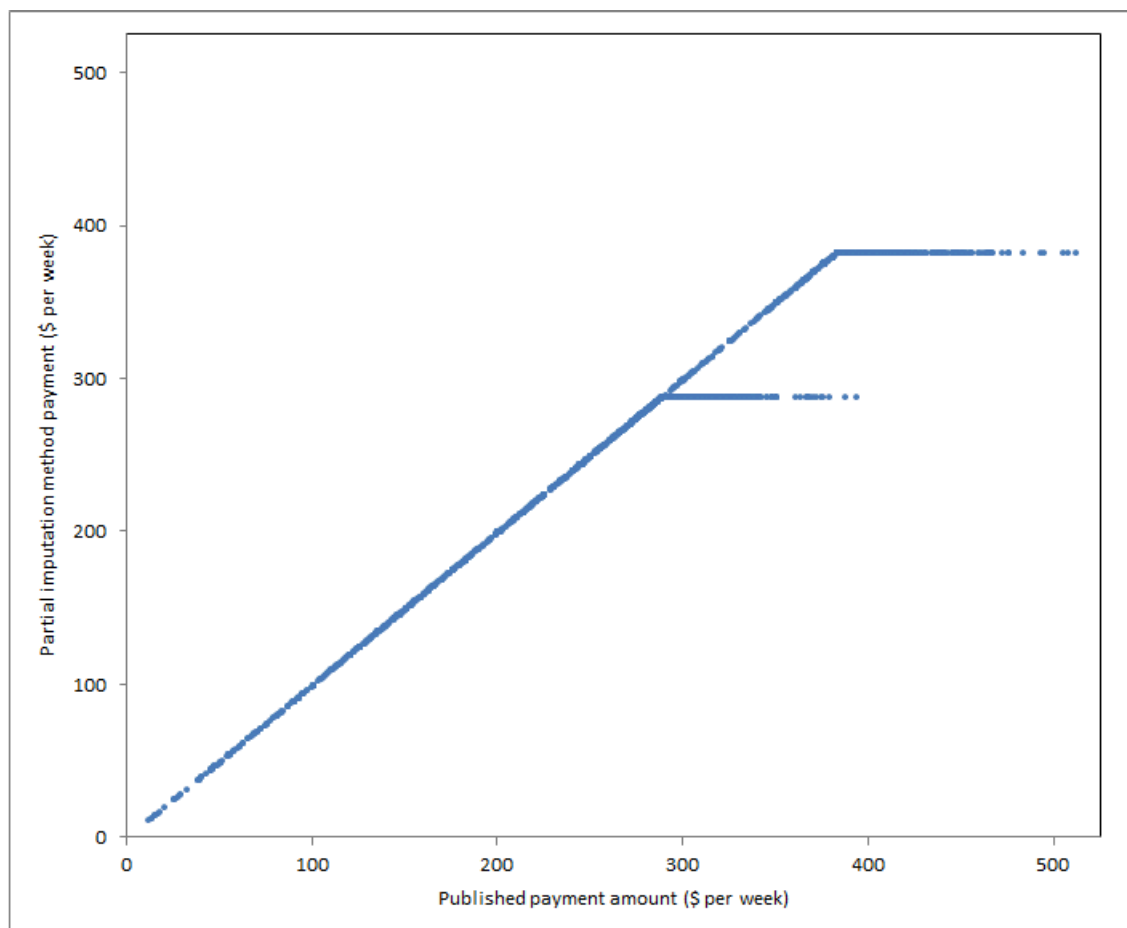


Figure 1: Plot of 2013-14 Age Pension data - partial imputation method by published method

Further analysis can be undertaken by SIH 2015-16 data users, as the fully modelled items are available on the CURF. The Data Item List provides a full list of these variables.